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## Advertising the Honeybee as a Dainty Lady

How a Big Chain of Restaurants Lays Emphasis on the Blossomy  
Sweet-Scented Phase of Honey Gathering

By A. A. Shields

**"M**ANY people do not like honey, for they believe that it is carried in the stomach of the bee, but this is not true . . ."—From a newspaper account of talk of W. A. Price before Indiana beekeepers' short course in 1924.

"To tell of all the foods that have encountered prejudice, due to unfamiliarity, would be to recount much of the merchandise to be found in any well-stocked grocery. Coffee has been in trade for hundreds of years, but it made its way slowly . . . Tomatoes were once regarded as poisonous. It is only during the last couple of generations that their place in human diet has been conceded."—Printers' Ink.

The public at large doesn't go into raptures over bees. Thoughts of bees are painful to the average man. He knows principally that they sting, and that, by all the laws of the working of the human mind, brings him unpleasant thoughts. He doesn't read nature books that tell of the wonders of the bee. He may have, in this latter day, an idea that a bee is a marvelous creature and does its work well. But if he has, his ideas are likely to have been gained from what he saw in one of the moving picture reviews—the educational type—where the bee was magnified until it seemed like a monstrosity.

What with plenty of headlines about "bee diseases" and "foul plague," and the "columnists" kidding that the bees must have appendicitis, because the beekeepers want such large appropriations—well, his ideas of bees and honey are not always pleasant.

How can the public's thoughts of bees and honey be made pleasant?

By "harping" on the pleasant side—the source of honey.

The Child's chain of white-tiled restaurants is doing it. And there may be a suggestion or two for honey-marketers in such methods, because this concern isn't doing it for the benefit of the beekeepers. **It's doing it to sell more honey.**

Newspaper space is being used in the cities where the chain has restaurants—New York and Chicago being the largest.

Notice how this advertising appeals to the sense of sight and smell as well as taste:

### The Source

Picture, if you can, a broad landscape consisting entirely of snow-white clover—

Acres and acres of sweet-scented blossoms stretching far as the eye can see—

And you will have pictured the earthly paradise of the bee, the source of her choicest honey;

For the perfume of the blossoms, through the magic of the bee, becomes the flavor of the honey.

To enjoy this exquisite flavor, try melted butter and honey with your griddle cakes at Child's.

Notice that phrase, "through the magic of the bee."

Here's another of the series:

### White Clover

As a discriminating lady selects her perfume, so does the bee select her flowers.

To find her favorite, white clover, she will fly from two to five miles.

Then lovingly from the heart of the blossom she sips the sweet nectar.

Later to be transformed into the most delicious honey in the world.

As a change from syrup, try melted butter and honey with your griddle cakes at Child's.

Note that "as a change from syrup, try . . . and honey." It doesn't say "eat more honey."

As Printers' Ink says: "There is one thing that advertising cannot do, however, and that is to get people to eat beyond their physical capacities. We can eat only so much. This is something that is apparently forgotten in some of these 'eat-more' campaigns. If we eat more wheat, we must, perforce, eat less meat and vegetables and fruits."

Still another of the honey advertisements:

### Distinctively Good

That there is a difference in the quality of honey is not the fault of the bees.

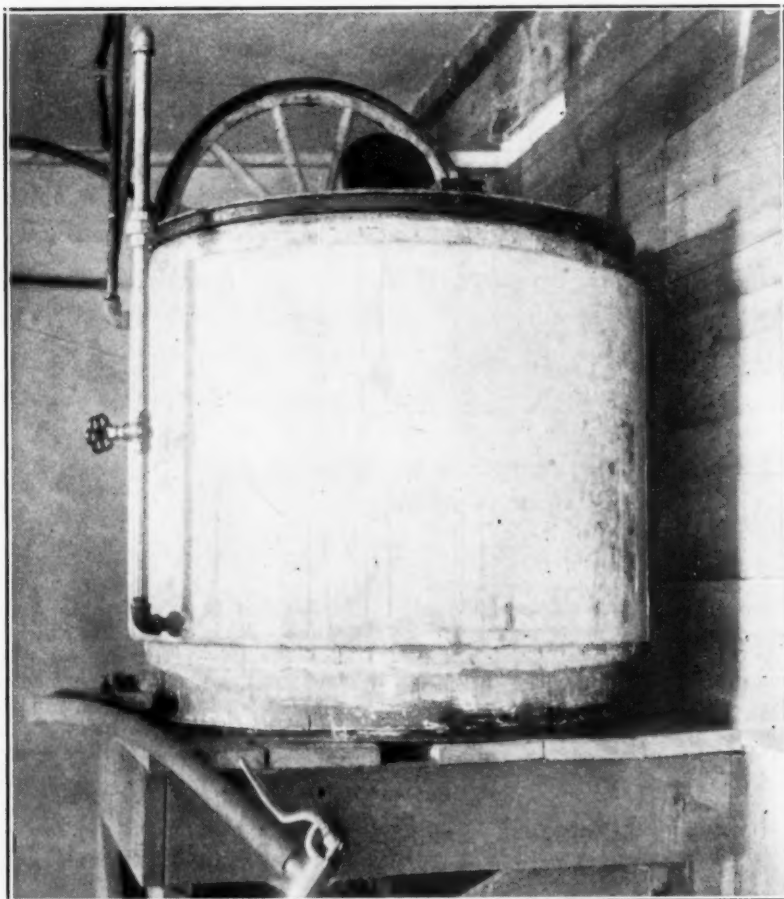
Provide them with the right kind of flowers, and they will produce the right kind of honey.

And they show their appreciation by making white clover honey the best in the world.

White clover honey is the choice at Child's. Try it with your griddle cakes.

Good honey advertising will have to take time to appeal to one or more of the senses—unless it's merely offering a cut price.

## Economical Heating Tank



THE picture on this page shows an outfit for bottling honey in use at the Rainbow Apiaries at Wheatland, Wyoming. Mr. C. V. Woolsey, the proprietor, has made use of an old four-frame extractor to provide an efficient and inexpensive tank for heating his honey before bottling. As can be seen from the picture, a jacket has been built around the extractor tank and connected with a steam pipe. This permits holding the contents of the tank at the desired temperature.

The baskets were removed from the extractor and an old Ford wheel replaced the crank. A belt from the crank shaft turns this wheel, and the reel which is left in the extractor serves as an agitator to stir the honey while it is heating. When the honey is cold and stiff at the start, the belt slips enough to permit the reel to revolve very slowly, the speed increasing as the temperature rises.

The steam which heats the tank is from a pressure steam boiler and can be shut off with the valve, which

shows clearly in the picture, when the honey reaches the desired temperature. When the steam is shut off, the reel is stopped to permit the honey to settle fully while still warm. By the time the honey has cooled sufficiently to be handled readily, it is clear and ready for bottling. The gooseneck faucet at the outlet of the tank permits filling glass jars without air bubbles, and the heating of the honey retards granulation while at the same time tending to clear it by the rising of bits of wax and pollen grains to the surface, where it is possible to skim them off.

Woolsey heats his honey to 160 degrees Fahr., which he thinks is sufficient to retard granulation for about a year. The tank holds nine hundred pounds. Since he heats and puts into containers four tankfuls each working day, the outfit is sufficient for handling a moderate crop. Woolsey has already put up a carload of honey in pails from 2½- to 10-pound size, heating it all in the tank shown.

It is of special interest as an example of efficient equipment provided from material already at hand.

## Sweet Clover Seed Crop Smaller Than Last Year

Sweet clover seed production is expected to be about 15 per cent smaller than the large crop of last year. Reports received during the third week of September by the United States Department of Agriculture from approximately nine hundred growers and shippers indicated that the decrease in production was due mainly to a reduction in the acreage harvested for seed in important producing districts in the Dakotas and Minnesota. This reduction, however, was offset to a considerable extent by increases in acreage in less important districts and better yields per acre in a number of districts.

Notwithstanding the fact that there was a larger total acreage of sweet clover than last year, the acreage cut for seed was smaller, due principally to low prices paid to growers last year, drought during the spring and summer in a few of the leading producing districts, and shortage of hay or pasture. In general, weather conditions were less favorable for the seed crop in northern producing districts and more favorable in other districts south of them.

Three hundred forty-one growers in the United States, whose aggregate acreage harvested for seed this year amounted to 10,619 acres, reported yields per acre which averaged 265 pounds, or approximately the same as last year.

Prices offered to growers were higher than last year, but lower than two years ago. On September 14, in the heaviest producing districts of the Dakotas and Minnesota, mostly \$6.50-\$8 per hundred pounds, basis clean seed, was paid, compared with \$5-\$6 in 1925, \$7.50-\$9 in 1924, \$6-\$8 in 1923, and \$5-\$6 in 1922.

Sales of sweet clover during the spring established a record, exceeding the unusually large sales of the preceding year. The carryover is relatively small, but larger than several years ago, when production and consumption were much smaller than at present.

The seed branch of the Canadian Department of Agriculture estimates the Canadian production at about 60,000 bushels, compared with 100,000 bushels last year. The decrease was attributed mainly to low prices paid to growers and increased acreage of alfalfa.

## American Honey In Germany

An interesting report received from a German food chemist states that there is false propaganda afloat in Germany with regard to American and other foreign honey. This propaganda tends to portray the American product as dirty, badly worked, and inferior in nutritive value. It is put out either through ignorance or malicious intent, but the association of German firms interested in the honey trade is to brand this propaganda as untrue.

It is said that American honey can be laid down in Germany cheaper than the domestic product. Exclusive of tariff and transportation charges, the cost is only about half as much as German honey, and the quality is superior. The Reich produces much artificial honey, which is difficult to tell from the natural product. The propaganda here mentioned aims to brand foreign goods as bad in order to create an artificial shortage and so raise the price of domestic honey. The following table shows the imports of honey into Germany for the first seven months of 1926 and 1925, quantity given in pounds:

Origin	1926	1925
Guatemala ---	1,556,730	544,635
Cuba -----	901,845	1,918,350
United States	597,555	771,750
Haiti -----	595,350	379,260
Chile -----	299,880	637,245
Australia ---	229,320	-----

Total ---- 4,180,680 4,251,240  
(Assistant Trade Commissioner W. E. Nash, Berlin, Germany.)

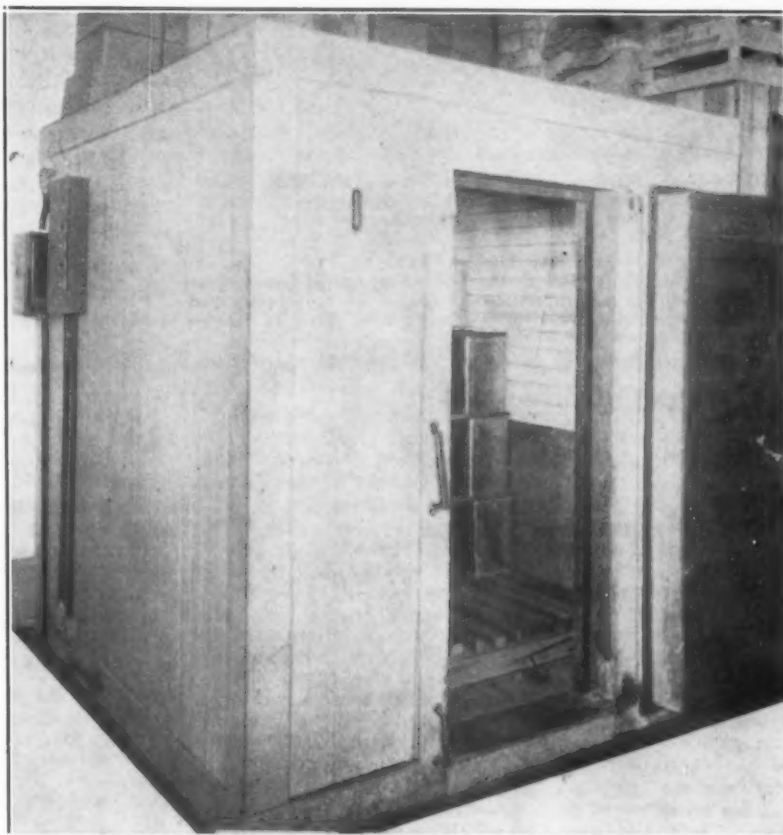
(Note: This matter was first brought to the attention of the Department of Commerce several months ago, whereupon steps were immediately taken to protect American interests with the cooperation of the Department of Agriculture, which prepared an official press release defending American honey against these unjust accusations. This release was translated into German, and distributed in Germany by the American trade commissioners, the propaganda being effectively nullified. The responsible parties were forced to retract and admit the purity and cleanliness of American honey entering Germany.)

### Polish Beekeeper Visiting Baldensperger

Friend Dadant: We have here, now, Mr. Leopold Pawlowski, of Rudnik, Poland. He speaks a great deal of you, as they use the Dadant hive in progressive apiaries in Poland. Cordial good wishes. Ph. J. Baldensperger, Nice, May 26.

## Constant Electric Heat For Honey

By B. S. Havens



**E**LECTRIC heat was given a new application recently when Martens, Read & Co., of San Francisco, bottlers and distributors of honey, found it necessary to adopt a different method of heating the compartment in which strained honey is refined.

The compartment has dimensions of approximately 7x7x7 feet, with six inches of insulation, consisting of about four inches of cork with a tongue-and-groove lining one inch thick, on the inside and outside. A loading consists of about 225 five-gallon tins of honey in a plastic state. When placed in the compartment the honey is so thick that it is practically solid and has a white appearance. After being left in the compartment for two days and two nights at a temperature of 150 degrees, the honey is clear in appearance and entirely liquid. Formerly the work was done by heating a water trough with gas burners and then placing the tins of honey in the trough.

The compartment is heated by means of ten General Electric air-heating units mounted around the bottom. The temperature is controlled by a temperature controller magnetic switch. Each heater has an individual snap switch which per-

mits the use of as many of the heaters as desired at one time.

The advantages of the electric method of heating as compared with the superceded method include the elimination of fire hazard, the reduction of time necessary for processing the honey, and improved results obtained. A saving in labor has also been realized, and rusting of the tins is eliminated. With the close temperature control it is not possible to overheat the honey, which would darken it and spoil its flavor.

### Bee Raising In Rotterdam District

According to report received in the Department of Commerce from Consul E. A. Dow, bee raising in the Rotterdam district is stated to be very poor this year on account of the bad weather during May and June. In the annual bee markets only one-tenth of the number of hives were offered as in the year before, most of which were only half full. The price per hive increased from Fl. 4.50 to Fl. 5.00. All hives were sold in a short time and brought to the heaths for honey production. (One florin equals \$0.402.)





# EDITORIAL

## AMERICAN BEE JOURNAL



Established by Samuel Wagner in 1861

The oldest Bee Journal in the English language. Published monthly at Hamilton, Illinois. Copyright 1925 by C. P. Dadant.

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C. P. Dadant, Editor; Frank C. Pellett, Associate Editor.  
Maurice G. Dadant, Business Manager.

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### Large Hives For Breeding

The English are making quite a little stock on the fact that Dr. Phillips told them that only 5 per cent of the bees in the U. S. are kept in deep frames of the Dadant pattern.

This is very true, but they must remember that the Langstroth standard frame was established some thirty-five years before the deeper frame was praised by us in the Langstroth book, when we revised it. We never urged beekeepers to adopt the deeper frame until Mr. Pellett came to work with us and was won over to the deep frame by his own comparative tests, without any arguments on our part. He pleaded the cause of the deep frame wherever he went, and that caused the enquiry to be made whether they were really much better.

Now it is said that the two-story Langstroth hive is better because it gives still more room for breeding. It gives too much room for a breeding apartment, for there is a limit to the capacity of a colony to breed and to its requirements for winter food. Nothing was said of a "food chamber" until the deeper hive was discussed. The larger and deeper frame is better only because it is more proportionate to the requirements of a populous colony.

Had Mr. Langstroth adopted the deeper frame when he invented his hive, the shallower frame never would have had any vogue at all. We say this in full knowledge of the qualities of both sizes of frames, since we used them, side by side, on hundreds of hives, for years.

One instance has been given lately, from the Government apiary at Ottawa, of a slightly greater crop from the regular Langstroth hive than from the deeper frame hive. One swallow does not make a summer, and we know of dozens of cases where the reverse was the fact. The reader should bear in mind that we have no financial interest whatever in the deeper hive, for we have no patents, no claims, on it.

### To Our Contributors

Would it be out of place to give here a few recommendations to the young beekeepers who propose to express their ideas for the benefit of the readers of a bee magazine? Many people write to us who have good suggestions to make, but do not appear able to put them in proper form for the use of the typesetter. Only a very few of the numerous writers who send us their prose have it in such shape that it may go to the printing office without corrections.

In the first place, it is very important that an article should be written carefully, legibly, either with pen and ink or with a typewriter. Some men of great capacity throw their ideas down, without order, sometimes with a pencil, and appear to expect the publisher to decipher them and make order out of chaos. We have occasionally received articles which were very good after they had been copied by a clerk and afterwards rewritten. Such slovenly methods will not do.

If your ideas are worthy of attention, take pains to present them in good order, in neat sentences, short and pithy. Write down what you wish to say, then read it over, let it rest over night; then read it again and rewrite it, if necessary. Follow the suggestions of a great French writer, Boileau, who said:

Hâtez-vous lentement; et sans perdre courage,  
Vingt fois sur le métier remettez votre ouvrage.  
Polissez-le sans cesse et le repolissez;  
Ajoutez quelquefois et souvent effacez.

(Make haste slowly and, without losing courage, twenty times over, put your work on the desk. Polish it without cease and polish it again. Add to it sometimes and often erase.)

It is only by dint of perseverance and renewed effort that one can produce something worth while. As you write it, it appears very good. But let it rest overnight and when you read it again you will see repetitions, misplaced punctuation, words that do not fully convey your meaning. A much better text will be evolved by rewriting it.

Nothing of any value is produced without labor.

As the magazine cannot be made up all at once, it is necessary to begin printing early in the month. For that reason, articles received very early have more chance of getting into the next number than those sent in the middle of the month. We always have more material than can be put into a single number. Bear this in mind when you write. It often happens that an article is held for several months before it is printed. We may do this for lack of room, or because we think the article will be of more interest at a later date, or because it conflicts with something else which we wish to use immediately.

### Advice Versus Locality

When we assumed the control of the American Bee Journal, nearly fifteen years ago, Dr. Miller was its most efficient contributor. We asked him to give us an occasional article of advice to beginners for each season. He replied by saying: "For what part of the United States do you wish this advice?" We saw at once, through this judicious question, that the American Bee Journal is too universal a publication on bees to make a suitable medium of seasonal advice for the general beekeeping public.

Yet, in spite of this wise suggestion of Dr. Miller, we occasionally fall into the mistake of making seasonal remarks which, although suited to our locality, are not suitable for the entire country. An editorial on "Getting the Bees in Shape for Winter," in our October number, drew this question from a subscriber in south Missouri: "I cannot feed my bees in September; in fact sometimes the crop is not over by the end of October. What do you advise me to do in this matter?"

This brings back to us the wise question of Dr. Miller: "For what part of the U. S. should I give advice?"

The prudent beekeeper will therefore understand that any advice given, referring to the season's management, must necessarily be understood as referring to the season and not to the date, or even to the month for which it is intended in each locality. From the north line of North Dakota to the south boundaries of Texas, Florida, or California, there is such a diversity of climates that each man must use his own judgment in caring for his bees, the general rules of bee management changing with the differences of climate.



## Have You Written Your "Corn Sugar" Letters?

The long and short of the "Corn Sugar" agitation is to be found in the fact that corn sugar is a poorer sugar than that of sugar cane or of beets, and for this reason the manufacturers of it want to be permitted to sell it for use in food products without declaring its name. If it were at all better than the other sugar, it would be proclaimed and the name "corn sugar" would be retained. But they know its weakness and that no one will buy it, if sold for what it is.

The Root people call our attention to the fact that, if you put a little pile of corn sugar and a similar pile of cane or beet sugar beside it, in a room where flies are plentiful, the flies will very soon discover that the first is not sweet and will congregate on the real sugar. This is a disinterested test, for flies cannot be bribed. They know, as soon as they taste it, that corn sugar does not have half the sweetness of real sugar. Try it. If you will also try honey you will see the flies congregate mostly on the honey. Of course, each one of us can make the test with his own tongue, but others may say that we beekeepers are prejudiced. Induce them to make the test with flies, if they are not convinced by their own palate.

Beekeepers, however, are not interested primarily in this question from the fact that corn sugar is a cheap sugar, the undeclared use of which is sought in food products. The great danger in a piece of special legislation, such as the proposed corn sugar amendment, now up before Congress in Senate Bill 481, is the establishment of an undesirable precedent which will open the way for further exceptions in our pure food laws of 1906, thus tending to destroy gradually that great bulwark under whose protection public confidence in honey has been so firmly established.

In fact, before the bill of amendment was barely in the House, there were pleas for other exceptions. The original "Corn Sugar" bill of Senator Cummins was amended in the Senate so as to make levulose as well as dextrose exempt from label declaration. In the hearings before the House committee, pleas were made that the sugar, maltose, and also the artificial sweetening agent, saccharin, be entitled to a share in the privileges of the proposed act. Announcements have also been made that, if the corn sugar amendment was passed, similar privileges would also be demanded for certain mineral oils to be used in foods. There is, in fact, no limit to the extent to which the principles of the Food and Drugs Act could be broken down if a single undesirable precedent is once established.

If legislation is needed and discrimination is to be avoided, the best way would be the labeling of all food products with the kind of sugar which is added. The public will then soon come to recognize the products of its preference by the label declaration.

A bill including a label declaration of all sugars in foods was in fact recommended by the Department of Agriculture, but for some reason this provision was not accepted by the House committee.

Beekeepers must bear in mind that if they want their interests defended they must awake to defend them. We have fought glucose and corn sugar since the seventies of the last century, and we must continue to do so. Congress reconvenes in December. If you do not already know, inquire from your postmaster the names of your two state senators and write them at once, addressed at Washington, D. C., thus recording your protest to the passage of Senate Bill 481, which would mark the first step in the destruction of your greatest market protection, the Pure Food Laws of 1906.

## Clipping Wings of Queens

Some of our friends on the Continent of Europe would have us believe that the clipping of wings of queens, to recognize them and to prevent their flight, is similar to the cutting of a limb in a human being or the putting out of an eye.

To those who may entertain such an opinion we will say that the wings of queens are, like the shell of their body, made of a solid, hard substance, chitine, which forms the external skeleton, and is not any more sensitive than the protruding nails of our fingers, which we have to remove in order not to be annoyed by their breaking, since man is no longer in the habit of wearing out his nails in digging the soil or in fighting, as he probably did at one time.

If we were to cut a leg from a queen, we would undoubtedly impair her capacity for traveling about the hive, but the removal of a part of the wing, to mark them and to keep them from flying away with a swarm does not injure them any more than the clipping of the end of the wings of our fowls, to keep them from flying over the neighbors' garden fence.

It is well to take care of our stock, but we must not carry our care to unreasonable and excessive limits. Dr. Miller, one of the most outspoken supporters of the clipping of queens, would never have done this if he had thought that it would injure them in any way.

## Western Honey Bee

After a few months' lapse, the Western Honey Bee is appearing again, and its editor, Miss Helen H. Weightman, has bought the journal, paid its debts, and proposes to continue its publication at her own expense. Such courage deserves support. The beekeepers of California and the Pacific Coast should subscribe to it. The address is 2823 East Fourth street, Los Angeles.

## Careful Inspection

Dr. Phillips, in narrating his trip to Europe, at the Medina meeting, told us that Dr. Morgenthaler has taught all the Swiss bee inspectors under him to use the microscope in diagnosing the bee diseases. Each inspector is provided with a microscope and makes a thorough examination of the cases to be treated. Our people have this to learn yet.

## Manipulation of the Colony Lessens the Crop

Professor J. E. Eckert, formerly of Raleigh, who was present at Medina and delivered an address, gave positive evidence that a colony which is very much disturbed by handling and shaking the bees, during the honey crop, may fail to gather its daily quota of honey, owing to this disturbance. However, a slight inspection, he says, is not injurious.

## Not Beekeeping

Just a few words on a subject which is now a burning question, but not connected with beekeeping.

Mr. Frederick W. Peabody, a noted New England lawyer, is broadcasting suggestions of his views on canceling the debt of Europe to America. He mails, on request, to anyone, a small booklet in which he explains his ideas. We concur with them.

We boast to the world that we are now the wealthiest nation on earth. We are. Yet we demand from Europe payment of sums that they could not pay within one hundred years, if they were ever so willing.

Write to Mr. Frederick W. Peabody, Ashburnham, Massachusetts, for his pamphlet, which he will send free to anyone.



Apiary, dwelling, and buildings at the home of Lloyd R. Watson, among the hills at Alfred, New York

## The Bride of Truth

By Dallas Lore Sharpe

"I'M to conduct you to the Forestry Building," said the young secretary in Dr. Phillips' office, leading the way out onto the campus, a touch of ceremony in the act which rather amused me. I knew the Cornell campus well enough to find my way around. Dr. Phillips had appointed our meeting at this hour in his own office, but I was to be conducted to the Forestry Building by a pretty southern girl, where he was waiting for me.

"What's going on in the Forestry Building?" I wondered. "Why my pretty guide?" At the entrance of the Forestry Building another secretary took me in charge, conducting me to a closed door, down a corridor, and left me. "Something queer in this," I mused, "or am I a bit queer?" and I opened the door upon a close-drawn group of men intently watching a man in the white coat of a surgeon, who was evidently operating.

Instantly I was aware that something of great import was about to take place and that my coming was expected. Dr. Phillips came forward to greet me. Mr. George Rea stepped out of the circle to shake hands. Professor Emerson passed me quietly around among the men and brought me to

The author of "The Spirit of the Hive" and numerous other delightful books of the out-of-doors here gives his impression of Lloyd R. Watson's demonstration of controlled mating of the honeybee.



The little brown laboratory, set among his bees, where Watson perfected his method of controlled mating

the man in white, Mr. Lloyd R. Watson. "What is it?" I wondered. This was the Graduate Committee of Cornell University of the Agricultural Department; bees were buzzing on a window; a line of little queen cages was spread along a table; and before

the man in white stood a strangely equipped compound microscope. Yet nothing looked familiar. Whatever it was that was about to happen could be nothing usual—even to these scientists, who looked on with profound interest.

For the circle had already reformed about the man in white. How like the incarnation of pure science he seemed. He was cool, quiet, confident, and in his slender fingers was held a beautiful virgin queen. She was struggling to escape. The man in white was speaking—going on with the story which my entrance had interrupted—of the years of experiments and their failures; of the slowly perfecting apparatus and the delicate technique he had evolved; and, as he talked, he wet the tip of a toothpick at his lips and with the spatula end mixed up a tiny spoonful of soft food from a lump of queen candy lying near and held it to the mouth of the captive queen.

She was hungry, the dear thing! And she licked off the tip of that sweet toothpick as quickly and as daintily as any captive princess in Fairyland ever licked off her spoon and platter.

If I gasped—at the delicate touch of the man, and at the gusto of the

kicking, licking queen,—it was no more than the rest of the company did! I have sometimes seen nursing mothers give their babies suck in the same natural, unconscious way. This bee was not frightened; the fingers pinioning her had handled royalty before. And so impersonal was their scientific touch, so certain and accurate, as to rival in their delicacy the gauged action of the microscope standing near.

All the while the absorbing story went on without inflection,—as if the compound microscope were telling it. It was the scientist speaking, not the person. The years of patient labor, the zeal for pure truth, had eliminated the personal equation. I did not know, at the moment, all that was involved in the story,—all the sacrifice of the man in white, and of a woman in white, and of friends in white, behind him. But I felt, as never quite before, the beauty and holiness of the quest for truth for its own sake. I thought, as the man in white was speaking, of Sir Galahad and his quest for the Holy Grail.

The young queen, betrothed to Science, having been feasted, was now being brought to her bridal bed. It was not a bed, but a strange sort of table, cradled at the edge of one leaf to fit accurately a virgin's royal body, into which she was laid and snared with many loops of finest silken thread thrown over her and the table, binding her by the thorax to the unwilling bed.

Now she has passed around the circle, from hand to reverent hand. I held her for a moment, still a virgin queen, but more, the Bride of Truth, the captive, and all but conquered, Principle of Life! And I handed her on, almost afraid to approach so near to the mighty presence of Life, as if one might not look upon his face and live. For life is more than death. It is the all-creating, all-controlling influence which always was and must always be.

Then a golden drone was taken, the other element of the twin force we call life. Off came his head, a sacrifice on the altar of his race, for unto this terrible and beautiful end was he born—after Nature's own way. Nature herself has found no better way than to sacrifice the drone to perpetuate the race. And while the virgin was being fed again, the union of the twin powers at the hands of Science was effected, even the lashing sperm cells counted, to say nothing of their race and strain.

The silken snare was loosened, the lovely queen, now a queen indeed, wavered from the hand of the man in white, and sailed over the floor, in a heavy wedding flight. Then she was returned to her neuter sisters in

her cage—and Science had taken another step forward, Truth had turned another corner and drawn a little nearer to us in his radiant robes of white.

I have not been asked to describe the mating of this golden Queen and Science,—the steps in the process of this eugenic union—but only to relate my impressions of what I saw. I have been a student of biology all my life; I have watched the pulsing protoplasm of the single cell divide and multiply beneath the lens, and marveled at the unseen power within the all but formless substance making two living forms of what had been but one. Yet never came I so close to the veil behind which the forces work their way with all flesh as when this man in white commanded these twin elements of the queen and the drone to unite at his

takes a hand, making such permutations and combinations at will as may result in larger revelations of life's "why and whence" than we have ever known before. Within the dark pit whence we were digged shines a new torch; though only

"A little glooming light, much like a shade,"

it will bring new light and more light.

So apiculture makes another contribution to human knowledge, lends its skill and enthusiasm to the greatest of all human quests,—the quest for truth. It was an impressive scene about the table in the Cornell laboratory—a group of practical scientists, used to handling facts for their useful ends, standing uncovered before one of their own fraternity, Lloyd R. Watson, as he brought them into the presence of Truth for its



Another part of the home yard

bidding, and work his will, within the beautiful body of this pure-bred bee.

I do not know all that it may mean, what new control it shall give us, what new truth it shall reveal. Certainly the ordinary beekeeper cannot resort to such artificial mating to improve the strain of his stock. This thing belongs to pure science, not to honey production; to the realms of truth, and not to the apiary. The whole process is too difficult; it is for other than practical ends. But what Science shall make it mean, in her search for the hidden laws of life,—that passes the imagination.

For here to the hand of man was a fresh surrender of the forces of nature. Here, close to the source and seat of Life, so close that one can command the first cause, Science

own sake. No word was uttered to show that which we all felt, but not a man of us but heard a voice within him saying, "Take off thy shoes from off thy feet, for the place whereon thou standest is holy ground."

### Some Crop For a Beginner

Prof. A. V. Mitchener of the Manitoba College of Agriculture reports that one of his last year's short course students who lives in the southwestern part of the province secured over 7,400 pounds of honey from twenty-five colonies during the past season. If all his students do as well, they will have to add to the staff or limit the number of students. The crops in the sweet clover districts of the Northwest are very much larger than those of other regions of America.



# "Honeybees and Fairy Dust"

By Mary Geisler Phillips

## A New Bee Story

TO name the author is enough to guarantee interest in this recent addition to books about the honeybee. Mary Geisler is the very pleasant wife of our good friend, Dr. E. F. Phillips.

In "Honeybees and Fairy Dust" Mrs. Phillips displays several qualities that show how fortunate her four boys were in the choice of a mother. She has an unusual understanding of the child's world, so rich in imagination; a style of language that does not offer any difficulty to the reader; and a thorough intimacy with both the science and practice of beekeeping that means accuracy to the young reader.

The two children in her story, Betsy and Jimmie Watson, are pictured as neighbors of Dr. Miller, none other than our beloved Sage of Marengo. The children are with him much and, in close resemblance to his familiar way, are taught the wonders of the bee.

Introduction of a bee fairy brings the whole story down to where every child loves to be in his mental playground. Mellifica is her name. She teaches Betsy and Jimmie how to "magic" themselves into bees and they visit among the bees in the

hive, learning very intimately of the wonders of its people.

The simple line engravings, picturing the bees and the fairies, are much after the style of those in the "Gazette Apicole," in France, fitting the paper in the book and the purpose of the story admirably.

The author's four big boys, to whom the book is dedicated—Big Frank, Little Frank, Billy, and Howard—are the luckiest boys in the world. I have read the book once and shall probably read it many times again to my boys and girls. Each time it will tell me more about the woman who wrote it. We all know "Big Frank" well enough to be sure that he is as pleased with his wife's success as we are.

Every member of the beekeeper's family will find "Honeybees and Fairy Dust" a most delightful book about bees, and the general reading public will find it a most admirably instructive "fairy" story. The book is attractively bound in cloth and is priced at \$2.00. Copies may be obtained from the publishers, Macrae, Smith & Co., Philadelphia, from the bee magazines, or, upon request, from local book stores.

G. H. Cale.

## Progress In Soviet Beekeeping

Just lately, I read in a Russian bee magazine about work which is being done in beekeeping in the Soviet republic. At present there are eleven bee magazines in circulation there, and if anyone is interested in them, I shall be glad to send them the names and addresses on request.

There is considerable talk among beekeepers there about organizing a company to manufacture beekeeping supplies of all kinds. There are several experiment stations working in different parts of the country. At present I am in correspondence with Mr. F. Tunin, at the head of the Experiment Station at Tula. As he expresses it, the Russian beekeeping leader is not born yet.

Personally, I would like very much to go back there and undertake some real revolution in the bee game, but I have been trying to get into the Soviet republic the last two years, without results. Perhaps it is considered that I am a strong American and my entrance would turn all Russians against them. To tell the truth, it is like the Chinaman said to a white officer, when the Reds captured

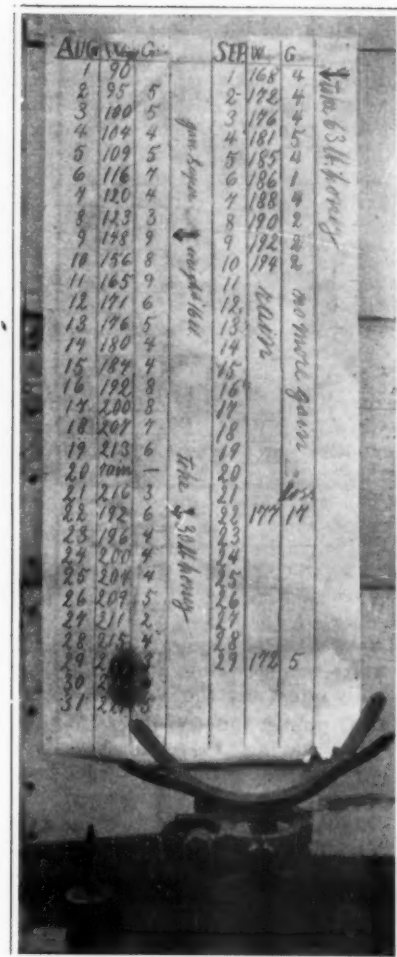
the Chinaman's town. The officer pretended to be a Red. The Chinaman said, "You are red like a radish, red on the outside and white on the inside." So I am an American on the outside and Russian on the inside. No matter how long I live here, it will never feel like home.

William Marks.

## What the Stingless Bee Did

As an example of insect intelligence, I recall, at the moment, the act of a colony of stingless bees that I once possessed. The colony of bees, combs and all, were brought home rolled up in the butt end of a Royal Palm leaf. As a result the combs and honey pots were smeared with honey. When placed in the hive I prepared for them, the ants, evidently attracted by the honey, attacked them. The entrance to the hive was a half-inch hole. This entrance the bees stopped up with wax for a period of two or three days, until they had cleaned up the honey, repaired their combs and put their house in order. They were then ready to keep out all insect invaders, and so opened the entrance.

Leslie Burr, California.



The above photo shows a hive on scales at the home yard of F. W. Leubeck, of Knox, Indiana. The weight was taken every evening when all the bees were in the hive. This hive has been on the scales every summer for the last ten years; the greatest gain it ever made in one day was nineteen pounds.

Such an arrangement is of much value in giving a measure of the condition and strength of the honeyflow and of its beginning and end. If accompanied by a weather record, it is of still greater value as the years go by, since much information can be gained from a study of the records concerning local conditions governing practice.

## Cereal Makers Advise Honey

Graham toast with milk and honey is a suggestion for a breakfast "rich in health and nourishment" in "A Book of Better Breakfasts" put out by the Postum Cereal Company of Battle Creek, Michigan. When it treats of well-balanced breakfasts "for those who are endeavoring to gain weight" it suggests muffins, butter and honey and grapefruit with honey.



A colony in the apiary of G. Armour, New South Wales, Australia. Looks quite American. Beekeepers in Australia and New Zealand have practically all followed our ways and use the same equipment, but they have gone way ahead of us in honey marketing.

This colony produced 500 one-pound sections and 300 pounds of extracted honey in one season, 1924-1925. It is an eight-frame hive of leather-colored Italian bees. Another hive in the same apiary, ten-frame size, produced fourteen sixty-pound cans in one season.

### Lived on Honey for Six Months

The "Australasian Beekeeper" of September 15 gives on its cover page the portrait of Mr. G. Armour, who "lived on honey for six months."

In the same magazine, Mr. Armour gives an interesting account of his efforts, successes and failures in beekeeping. A paragraph of this article gives an insight into some of the troubles of life in Australia. He writes:

"We had 2,000 sections ready early in November. Thousands of gum and ironbark trees were drooping with buds just bursting. Nearing dark one muggy evening, my wife called me to the back of the house to listen to a windstorm approaching in the distance. That windstorm turned out to be the most disastrous plague of beetles that ever passed through the district. They stripped millions of trees bare of leaf and buds. A large pepper tree in our yard was cleaned off to the branches under two hours."

This is equal to the old-time grasshopper invasions of Kansas, which are now only a memory.

## Canadian Imports and Exports of Honey and Beeswax

Statement showing imports for consumption into Canada by countries of honey and beeswax during the fiscal year ended March, 1926, and the five months period ended August 31, 1926.

### Fiscal year 1926

Honey in the comb or otherwise, and imitations thereof:

	Pounds	Value
United Kingdom	5,116	\$ 553
Australia	1,468	140
British W. I., other	2,294	184
Hongkong	2,032	351
Jamaica	6,984	454
New Zealand	804	119
United States	64,624	13,955

Totals 83,322 \$15,756

### Beeswax:

United Kingdom	33,794	\$14,394
France	53,512	19,696
Germany	4,480	2,000
Netherlands	3,317	1,313
Portugal		
United States	55,107	24,699

Totals 150,210 \$62,102

Statement showing the exports by countries of honey during the fiscal year ended March, 1926, and the five months period ended August 31, 1926.

### Fiscal year 1926

	Pounds	Value
United Kingdom	482,899	\$ 58,705
British Guiana	420	38
British W. I., other		
Hongkong	240	51
Newfoundland	605	93
Belgium	960	134
China	360	51
Denmark	14,400	1,776
Dutch East Indies	650	64
France	4,480	535
Germany	461,028	46,140
Netherlands	604,028	49,590
Norway	12,740	1,339
Siam	56	10
Sweden	5,548	830
United States	57,204	7,855

Totals 1,645,618 \$167,211

### Five months to Aug. 31, 1926

Honey in the comb or otherwise, and imitations thereof:

	Pounds	Value
United Kingdom	192	\$ 40
Australia		
British W. I., other	1,322	106
Hongkong	582	103
Jamaica	10,653	556
New Zealand	8,279	1,258
United States		

Totals 21,028 \$ 2,063

### Beeswax:

United Kingdom	2,233	\$ 1,009
France	39,507	23,191
Germany		
Netherlands	2,290	1,103
Portugal	2,204	984
United States	16,565	7,160

Totals 62,799 \$33,447

### Five months to Aug. 31, 1926

	Pounds	Value
United Kingdom	164,713	\$18,163
British Guiana		
British W. I., other	120	10
Hongkong		
Newfoundland		
Belgium		
China		
Denmark	12,660	1,915
Dutch East Indies	471	119
France	7,449	633
Germany	167,680	15,844
Netherlands	1,800	234
Norway	600	69
Siam		
Sweden		
United States	39,843	5,774

Totals 395,336 \$42,761

## Unusual Season

This has been a strange season with us. We have had lots of good bee pasture, but the weather has been very unfavorable for the bees to work. It has been too cool and cloudy, nearly all season, for bees to do good work. Where we had drawn combs the bees did well, but they would not use foundation. We placed a shallow extracting super with drawn combs on all colonies run for chunk honey. Soon as these supers were about one-half full we raised them up and placed a shallow super with full sheets of foundation underneath. The bees passed up through the foundation and finished the top super fine, but would not work on the foundation. The colonies were

very strong and some of them filled three supers with drawn combs above a super with full sheets of foundation, and would not work the foundation.

Our crop is about 50 per cent of last year, our honey is fine quality and we have a ready market for it. We never have to do any price cutting. Leroy Churchman, Kansas.

## Says Honey Is Fattening

"Is bees' honey fattening?" asks a correspondent of William Brady, M. D., who syndicates a daily health column to the newspapers. He replies: "Bees' honey is the only kind of honey I know about, and it is as fattening as cornstarch, candy, cane sugar or molasses."

# The Blooming of Orange Trees in Spain

By Jose Chocomeli.

Translated from the "Gazette Apicole"

WHEN a traveler, who is not yet accustomed to the beauties of the eastern regions of Spain, travels on the railroad between Madrid and Valencia, through the immense orange tree forest extending between Algemesi, Alcira, Carcagente, Puebla and Manuel, he experiences a sensation of enchanted astonishment, an amazement, which the best description could hardly express. And yet, he who thus crosses the country on a train, at the time of the blooming, and passes through a perfumed tunnel walling the track on both sides, so that his vision is not extended, cannot guess what a beautiful panorama may be seen from the top of the mountains bordering this spacious valley, at the bottom of which winds the Jucar River.

From the mountain top, this exuberant vegetation, with its leaves that shine in the sun, seems like the issue of a sumptuous cloak "thrown down in his sight by a Moorish king"; its bright green tints, mellow as velvet, are enhanced with the spangles produced by the beautiful golden fruits and the white ermine of the orange blossoms, which, in April and May, add to the view the appearance of a light snow. The air is perfumed by the intense odor! the shining sun makes the sky look more blue and the ochre of the soil redder; the quiet rumor of the restless bees, intoxicated with activity, who are searching among the petals sprinkled with golden pollen, and of the lazy drones who fly through space in their love search; the small homes scattered among the gardens; the farm houses and cottages, which might be compared to a flight of white doves, resting upon the valley; the high smokestacks of the irrigating plants, and the tall palm trees which seem to direct our thoughts towards heaven; lastly, when evening comes upon this ideal picture, the songs of the country people who often retain the Arabian psychology and rhythm of their origin—all this forms such a ravishing whole, so harmonious, that one feels transported into a region of eternal happiness. It is probable that a poet like Maeterlink, before such an enchanting sight, might have written the most poetic page of his entire artistic production.

After having appreciated this, one will readily understand the attraction for beekeeping here, not only on account of the beauty of the scenery, but because agriculture is

most active, the cultivation of orange trees attaining the maximum of effort and efficacy.

Indeed, the growing of oranges, which occupies within the sole province of Valencia some 20,000 hectares (about 50,000 acres) growing some five million trees (in all the Mediterranean provinces the total is 113,000 acres), the irrigation of which is mainly artificial, requires most careful cultivation, with much manuring and irrigating; this, as we know, considerably increases the yield in nectar. I do not know of any other vegetable product more carefully farmed by man. In addition to its oranges, whose renown is well established, its leaves, green or dry, are utilized for the rearing of cattle; its wood is used in industry, as well as the petals of its blossoms, the green oranges, the peelings, the seeds and the pulp of the defective fruit.

The honey-producing branch was at one time the least important and the least progressive. At present, however, it appears likely to be overdone, so numerous are the skeps located in the region at the opportune time, as have been also the apiaries of modern movable-frame hives, during the past two years.

But all this appears likely to be destroyed, under the danger of American foulbrood; this terrible epidemic appeared during the past year in such a scope and in so intense a manner that we fear none of the 25,000 colonies of bees which official statistics report as existing in the region of Valencia may survive. Knowing the immense difficulties accumulated by circumstances in the fight against so terrible an enemy, it is easy to foresee the slowness with which the apiarian recovery may come in this region, where the orange tree has proved itself to be one of the best honey plants in Europe.

The following information may give a brief idea of the most interesting features of the blooming of the orange trees in Spain, which has been practically ignored by most of the works on beekeeping, even the most eminent:

The blossoms of the orange are hermaphrodite, solitary or in clusters, white, and of medium size. The corolla is made of five petals.

The blossoming begins, with very slight variations, in the first ten days of April. The blossoms produced in that month are usually larger and

richer in nectar than those that come in May. The maximum of nectar secretion may be observed between 7 and 8 o'clock in the morning. In very favorable years we have found blossoms of which the ovary was completely covered with nectar, but ordinarily the quantity of nectar does not exceed half of the depth of the ovary.

The bees are fond of forcing their way between the petals and the stamens of fresh buds; one may readily see them at this work in fine spring mornings.

The minimum of nectar is produced about 3 P. M. After that hour the production of nectar appears to increase, since as late as 9 P. M. the blossom is found to contain even more than in the morning. The nocturnal secretion is always more abundant than the daylight production.

It seems strange that the activity of the field bees does not seem to coincide with the time when the nectar is most abundant, in the morning hours. The greatest activity begins towards noon and is highest about 1 P. M. The bees undoubtedly harvest more in the afternoon than in the forenoon. The only explanation we can offer of this anomaly is that they appear to wait till the nectar is partly evaporated of its aqueous portion, existing in greater amount when recently produced.

An orange blossom may be figured upon as lasting a little over four days. The growth of the bud requires about twenty days. A few hours before the opening of the blossom, its nectaries begin to function. The nectar is produced in a circular channel between the ovary and the base of the stamens. But the latter, as well as the petals, are quite often bespattered with it.

The pollen is yellow and abundant; the bees are always more or less covered with it.

It is not easy to ascertain at what time, in the life of the blossom, comes the greatest secretion of nectar. We think the rotation of production mentioned above is repeated during each of the four days of blooming. We have seen blossoms that had lost their petals, and in which the stamens were wilted, still containing large drops of nectar.

The last blossoms disappear towards the middle of May. The blooming of an orange tree lasts about four weeks, but the total blooming of an orange grove may



last a month and a half. This is because the plantations close to the mountains open their blossoms ten days earlier than those of the valley.

From exceptional climatic causes, due perhaps also to the mode of cultivation, some blossoms appear at other times of the year; but the secretion of nectar is unimportant. After the blooming, there may be some "honeydew" upon the leaves, but this is of no practical value.

The temperature of this region rarely descends to the freezing point. Rains are not frequent and are very light at the time of which we speak; but not so with the wind, which sometimes interferes with the flight of the bees.

Swarms are very numerous during the bloom, which is very intelligible in so abundant and so short a honey crop. This is one of the greatest disadvantages of the region, and another is the entire lack of other bloom, and therefore of harvest for the colonies at any other time of the year.

The hives of large size, Dadant or Layens, are those that have given us the best success. Migrating beekeeping is almost indispensable here.

The intense aroma of the orange blossoms has an influence, as we believe, upon the behavior of the bees, for at that time they are exceedingly aggressive. They come in great numbers to the irrigation basins, for water, and it is often risky to come near or even to pass by on the road.

The orange blossom honey (called in Spanish "miel de azahar") is fluid, of a fine amber shade, with sweet aroma, and does not granulate readily. We have had some which remained four years liquid.

This honey is among the best produced in Spain and constitutes a new grade, for the orange groves have not been greatly developed until 1850, and the orange honey crop is relatively a new brand. The divulgation of modern scientific apian methods is still more recent, with the installation of apiaries possessing the most perfected material; our late styles of hives and instruments have nearly all been purchased in French establishments.

Here is the result of the analysis of orange honey, made by the eminent chemist, Alin Caillas, upon a sample gathered in our apiaries a few weeks previously:

Water	21.00
Glucose and levulose	68.70
Saccharose	6.30
Pectic compounds	2.15
Mineral compounds	0.97
Various materials and losses	0.88
Total	100.00

Detail of mineral compounds:

Phosphate of iron	0.251
Phosphate of lime	0.535
Carbonates and sulphates	0.184

In closing we will add that the increase in bees in the region has had an influence upon the increase of production of oranges; we have verified this ourselves, especially in the years of short blooming.

Movable-frame beekeeping is still in its infancy in all of Spain; the only thing that would hasten its development would be official support. We have great hopes on this subject, for the present government of Primo de Rivera is the only one that has officially shown interest in our welfare, by reducing duties upon articles that we have to import and by taking charge of educating the public in progressive apiculture.

King Alfonso XIII, who is a leader in Spanish beekeeping as well as a progressive sovereign, takes interest in these matters. Justice, education and peace are the mottoes of our present government, and all who believe in laborious activity such as that of bees, and who believe that the liberal cooperation of which they give such a good example offers a firm basis for social life, have put their faith in it.

## Large Brood Chambers

By Rev. B. Wright

It was a pleasure to read the editorial on "Large Brood Chambers" in the August American Bee Journal. The experiments on brood counting carried out during the last few years are all vitiated by being carried out in localities where the honey income of the colony was not sufficient to maintain a large brood nest.

Bees do not destroy a third part of the larvae a day or two after hatching from the egg unless the food supply is insufficient, and it is not fair to a queen to put her on test for egg-laying unless there is an ample supply of nectar in the fields as well as an ample staff of bees in the colony to gather it and tend the brood.

The Bee World has published some articles in which I have subjected these brood counting experiments to examination and have also given details of my own experience. I get queens to lay something like 4,000 eggs a day in the brood rearing season, so Mr. Dadant senior was well within the mark when he gave 3,000 to 3,500 as the number of eggs a first-class queen will lay during the height of the season. My queens were quite ordinary ones, daughters of a mother imported from Italy, for whom I paid five shillings.

Manhattan, Kansas, and Washing-

ton, D. C., are outside the glaciated area of the U. S. A., and their soil is therefore probably deficient in lime, which has such a beneficial influence on nectar secretion. Salisbury Plain, of course, has solid chalk a few inches below the surface, and there is always sufficient nectar and pollen for brood rearing to be gathered from the time when the elms flower in February, provided the weather is propitious. The smallest brood chamber I am satisfied with is the twelve-frame modified Dadant. When I get eight combs solid with brood, except for a couple of rows of pollen cells under the top bar, and half a square inch of sealed honey in the top corners, two more combs filled half with brood and half with stores, and the two outer combs filled with sealed stores, it is evident that anything smaller than this is going to cause trouble by making swarming inevitable.

The two beekeepers at Lawrence, Kansas, who said that "if Dr. Merrill had tested queens from their apiaries he would have found greater breeding than he did," did not put the matter in quite the right words. If the unfortunate insects had been transported to Manhattan, Kansas, they would have suffered from famine as badly as the queens that were experimented on by Dr. Merrill. If the queens had been tested at the apiaries of these beekeepers they might have given a much better result, for if I remember right the border line between Kansas and Missouri is, most of it, in the glaciated area.

There is reason to believe that the scientists are now making brood measurements in more favorable localities; if so, it will not be long before our queens are officially permitted to lay 4,000 eggs a day.

England.

## Honey and Diabetes

Under the caption, "Is This Correct?" about honey and diabetes, page 506, October:

The popular idea that the diabetic may use honey in place of the forbidden sugar is wrong. Honey is a combination of "pre-digested" and easily absorbed sugars, but this does not benefit him. The lack of a certain internal secretion (insulin) slows up or may entirely suspend the burning or chemical combination of the sugar with the body cells. In other words, without enough insulin our body cannot use any carbohydrate, including honey, which, being eaten, then accumulates in the blood until it acts as a poison.

Dr. Evans is sustained.

J. F. Brenckle, M. D.

## Meeting of American Honey Producers' League

THE 1927 meeting of the American Honey Producers' League will be held in New Orleans, January 25, 26 and 27. Headquarters will be at Hotel Jung, on Canal street, where arrangements have been made to accommodate attending members at very moderate cost. During the winter months a special tourists' rate is in effect on all railroads in the United States, so that a trip to New Orleans can be made at moderate expense. New Orleans throughout the winter attracts thousands upon thousands of travelers from the North, who come here to escape the cold weather of their homes, and as a result our hotels are always taxed to full capacity (the manager of the Jung assures me that he will turn away an average of 150 persons daily); therefore it is absolutely necessary to **make your reservations early**, as far in advance as possible.

New Orleans is claimed to be "America's Most Interesting City," and no guest in New Orleans ever goes home with other feeling than that of being charmed and delighted with it. The Old City, at times under dominion of the Spanish and French, is perhaps more European in type than any other in the United States and offers rare opportunity to tourist and pleasure seeker to explore quaint nooks and crannies of historic importance. The old Spanish Governor's Mansion is intact and perfectly preserved (it was here that the Marquis de Lafayette stayed when in New Orleans) and today is used to house a remarkable collection of Louisiana products and mementoes.

Unfortunately the American Honey Producers' League is not given the whole-hearted support of American beekeepers which it deserves. A person must indeed be blind if he cannot see the need for some organization which can afford a common meeting ground for representatives of the widely separated (by actual distance in miles), but closely related (in interest) beekeeping activities of America. It is about as sensible to deny the need for our National Congress as to deny the need for a national organization of beekeepers. What individual in New York State has the breadth of vision or that vast store of knowledge of detailed facts which would qualify him to draft regulations for the ultimate good of beekeepers of California, of Wyoming, of Florida, or of other states whose problem and needs are in some measure at least peculiar to their localities?

A national beekeepers' society is as necessary to American beekeeping

as the National Congress is to the successful government of our land.

There is one feature of the American Honey Producers' League which I think is sometimes overlooked. It is that, although every attending member is given the privilege of joining freely in all discussions, important issues are **voted on** by delegates only. If such provision were not observed, Ohio beekeepers at the last meeting in Cincinnati might have been present in numbers sufficient to carry every vote according to Ohio interests, or next year Louisiana beekeepers might pack the meeting and out vote everybody else; but no such **possibility exists**; a voting delegate represents twenty-five League members (or fraction thereof) in his home state, **and only delegates vote**. This year Louisiana will have two votes, possibly, but no more. This wise provision prevents any local crowd from stampeding the League, which is national.

Grant, if you will, that our present organization is all out of whack, antiquated and, if you wish, not representative of the majority wishes. **Whose fault? YOURS.** The present League is strictly plastic, every meeting represents the majority vote of delegates present, and if your views are not adopted it is either because your delegate was not present or because he failed to convince other vote holders that your views were correct and just. Be fair to the League, be fair to yourself. How can your problems receive the consideration they merit if you (or your association) should not be represented in New Orleans? If you don't approve of past League policies, come help frame new ones and better ones. The League will welcome you as delegate or member, and it needs your brains for some of the knotty problems it must solve. The charm of New Orleans is attraction enough to flood our city all winter long with throngs of sightseers. Let it entice you to attend in January, and the enthusiasm of the League meeting will make a better bee man of you.

At times I am given to romancing a bit, and in my mind's eye I see a **really representative central organization**. It is a sort of melting pot into which needs and worries, successes and discoveries, all alike, are dumped; and by skilled specialists each item is indexed and filed, each problem given its answer, each helpful idea transformed into useful knowledge, made available to all. Of such Central Organization each State Organization is a member, and demands of its members a small fee

for support of the National Society; each state sends delegates in proportion to the number of its members, and by this plan the **National Society automatically becomes a live issue** to every constituent member. With such an organization our present haphazard, half-guessed, half-spiteful, harmful attempts at legislation aimed at interstate beekeeping problems, would be at an end.

Lewis Cass Spencer, M. D.,  
Vice-Pres. of the League,  
Chairman Com. on Entertainment.  
Address: Orleans Parkway, R. F. D.  
No. 2, New Orleans, La.

## Tells of Bird Honey Hunter

Chicago boys and girls attending a lecture on "Bird Manners" given at the Field Museum of Natural History heard Dr. Lucius C. Pardee tell of the honey guide, found in Central Africa:

"He is fond of honey, but is unable to get it from hives, so he makes a terrible to-do in front of some man, usually one of the porters in the traveler's caravan. The bird hops up and down until presently the porter grabs a pail and, guided by the honey bird, walks to the hive, and there is honey for supper.

"When a human being fails him, the honey bird attracts the attention of the ratel, a little animal with a skin so thick that it is impervious to the bee's sting. The ratel attacks the hive, the bees fly out, and in the general confusion the honey guide gets his quota of sweets."

## Beekeeping in the Newspapers

It is so uncommon to see bees and beekeeping mentioned in the periodicals that are not specially devoted to agriculture that we consider it worth while to make a note of it when we see it. The "Globe-Democrat," of St. Louis, of October 10 contains a very interesting article describing the apiary and methods of O. M. Headlee of Morehouse, Missouri. The description is good, with very few errors. Such articles lead the consumer towards the idea of using honey.

The November number of "Asia," in an article entitled "The Valley of Wine," contains a picture of a Caucasus apiary, with colonies in long clay tubes, such as we have occasionally shown in the American Bee Journal.

At the international meeting of beekeepers at Quebec, in September, 1924, Mr. James I. Hambleton, of the U. S. Bureau of Entomology, called attention to the fact that one of the best means of advertising honey is "to interest teachers, professional

men and the clergy in apiculture, with the object of organizing bee-keeping courses in every school in the country." There is no doubt that we can increase the demand for honey greatly if we interest the general public in the honeybee. Honey is peculiar in being recognized as the best possible food and yet being neglected by the consumer, just out of popular indifference. This is our fault as much as anybody's.

### Does a Bee Think?

In my opinion, a bee, or any other animated being that has a brain, is capable of reasoning. I can't see why there should be any question on the point. Of course, there are degrees of reasoning power. We have the man who calculates the distance, speed and size of the sun, moon, etc., and figures out, years in advance, the day, hour and minute when an eclipse of the sun will take place. Then we have people who cannot count beyond ten, and, as in Hawaii, for instance, those who have no conception as to their age and can only fix the time of past events as having occurred before or after a certain volcanic eruption or lava flow. And here I venture the suggestion that there is less difference between the reasoning power of the bee and the ignorant Hawaiian than there is between the ignorant Hawaiian and the man who calculates the movements, weights, distances, etc., of the planets, or the stress of a structure like the Brooklyn bridge.

Leslie Burr, California.

### Broadcasting Honey Recipe

Here is a recipe for honey marshmallows broadcasted by Prudence Penny, household expert for the Hearst chain of newspapers:

"1 cup sugar, 1-3 cup white syrup, 6 tablespoons honey, 6 tablespoons gelatine, 1 teaspoon vanilla.

"Dissolve gelatine in three-fourths cup boiling water. Then add syrup, sugar and honey. Stir without cooking until sugar is dissolved. Then add vanilla, and beat with wire whip until very stiff. Spread in pan that has been sprinkled with sugar. Keep in tightly covered tin boxes."

### Mexican Honey Exports, 1925

According to figures issued by the Mexican Department of National Statistics, exports of honey amounted to 3,000,335 pounds for the year 1925 and were valued at approximately \$167,307. Of this amount, 1,725,800 pounds were shipped to the United States.—(Consul General A. W. Weddell, Mexico City.)

## The Common Milkweed

By Leslie M. Nordholm, Ames, Iowa

TO the layman the milkweed is just one flower of many that are found along roadsides and in waste places; to the naturalist it is a flower of extreme interest; and, to the beekeeper, especially in certain regions, the milkweed is a honey plant of much importance. In some sections of the country, especially in northern Michigan, yields of surplus honey of from 50 to 100 pounds per colony have been reported year after year. In other sections it is one of several plants that afford pasturage for bees during the summer months.

The common milkweed, *Asclepias syriaca*, is often called silkweed and butterfly weed. It is generally known that the term milkweed comes from the white, milky sap found in the stem and leaves. Silken parachutes, to which the seeds are attached and by which they are carried on the wind, give rise to the terms silkweed and butterfly weed.

The milkweed plant often grows to a height of from four to five feet. The stem or stalk is sturdy, strong and straight, and is about a half inch in diameter at the base. The color of the flowers ranges from white to purple. As a rule there are four or five flower-heads to the plant, but this number may vary from only one to as many as eight or ten. There is still a greater variation in the number of florets to the head. While some have just a few, others have a great many. Of the plants studied by the writer during the past summer, those flowers that were pronounced purple in color averaged about sixty florets to the head, while those that were white averaged nearly ninety-five. The individual florets of this species are almost universally five lobed, but occasionally one will find a floret with only four lobes—much in the same way as an occasional finding of a four-leaved clover.

The milkweed shows an almost ingenious ability in compelling insects to work for them. They have perfected their mechanism in every part until no member of the family even attempts to fertilize itself; hence their triumphal, vigorous march around the earth, the tribe numbering many hundreds of species, located chiefly in the tropical and warm temperate regions that teem with the insects whose cooperation they seek.

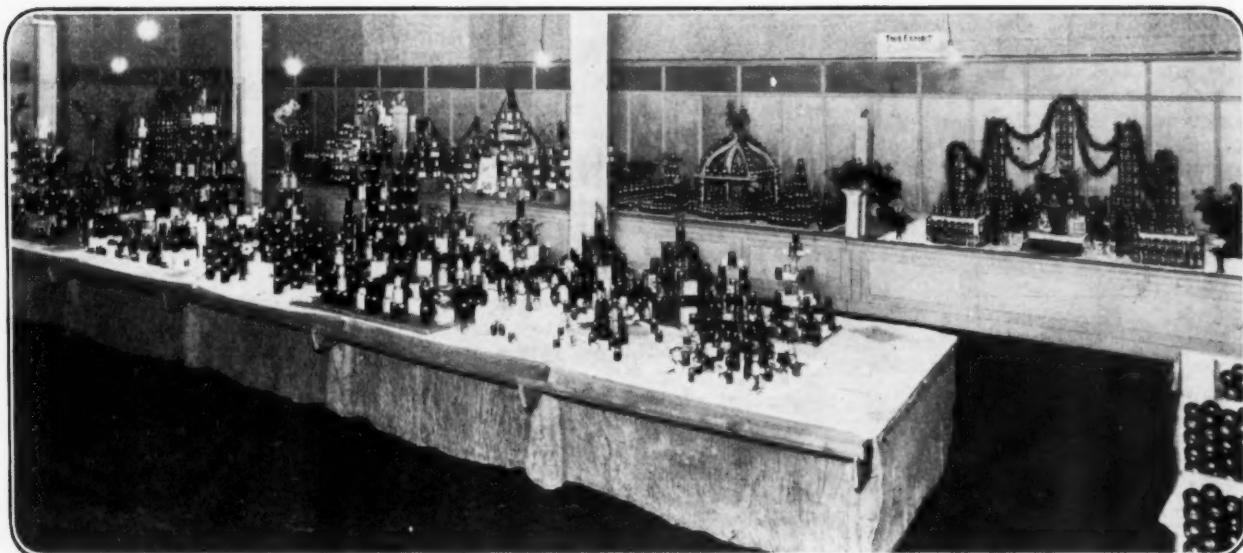
This weed is very common to us all. Its exquisite silky seed-tufts are far more attractive to the human eye than the dull pale to purplish-pink flowers. Not so, however, with the insects. Knowing that the fragrant

flowers are rich in nectar, bees, wasps, flies and butterflies come to feast. These families of insects only give but an idea of the kinds that visit the flowers. Honeybees and bumblebees of many species visit the flowers from early morning until late in the evening. The honeybees carry to the hive loads of rich nectar which, it seems, is constantly secreted throughout the day. Wasps of many orders come for their share of the nectar. Countless flies and butterflies can be seen hovering about the flowers and alighting occasionally for their load of the sweets.

The insect visitor, finding its alighting place slippery, claws about in all directions to secure a hold, just as it was planned, for in its struggles some of its feet must get caught in the fine little clefts at the base of the flowers. Its efforts to liberate its foot only draw it into a slot at the end of which lies a little dark-brown body known as the pollinia. In a newly opened flower, five of these little bodies may be seen between the horns of the crown, at equal distances around it. The pollinium is hard and horny, with a notch in its face. It is continuous with and forms the end of the slot in which the visitor's foot is caught. Into this it must draw its foot or claw, and, finding it rather tightly held, must give a vigorous jerk to get it free. It sometimes happens that the insect is unable to free itself and finally dies. It is very common to see dead bees, flies and other insects dangling from the flowers.

When it jerks its foot loose the pollinium is pulled out of the flower. Attached to the pollinium is a flattened yellow pollen-mass, and as the insect flies away there is a pair of these pollinia, that look like tiny saddlebags, dangling from its feet. One might think that such a trap as this, that the flowers "lay" for the insects, would discourage them from making more visits; but the desire for food is a mighty urge. While the insect is flying off to another blossom the pollen-masses swing free from its feet, and when it alights on the next flower the pollen grains are shaken onto the stigma of the flower. Fertilization by means of insect aid is the result. Honeybees and bumblebees have been caught with a dozen pollinia dangling from a single foot. If you see a bee at the hive entrance with some of these saddlebag stalks attached to its feet and "flagging" you at every step, you can know that that bee has been working the blossoms of the common milkweed for its nectar.





General view of the exhibit

## British Columbia Honey Exhibit

By J. W. Winson

THE Provincial Exhibition of British Columbia, held at New Westminster the first week in September, was a great advance on its predecessors; yet many acknowledged that despite its wonderful array of flowers and fruit, its crowded barns and pens, the most remarkable feature of the fair was the honey exhibit.

Nearly four tons of honey was exhibited, the larger proportion being in the 500-pound display class, where eight competitors aggregated just over two tons in their "shop-window"

arrangements. The prizes in this class range from a hundred dollars downward, and much labor, art and expense is bestowed on their exhibits by the contestants. W. H. Turnbull, the winner this year, focused his design on a basket of flowers surrounding a small figure, "The Sweet-heart of the Flowers."

In the 150-pound class seven entrants made alluring displays with plate glass and mirrors. The fact that the British Columbia Honey Producers' Association allows 50 per

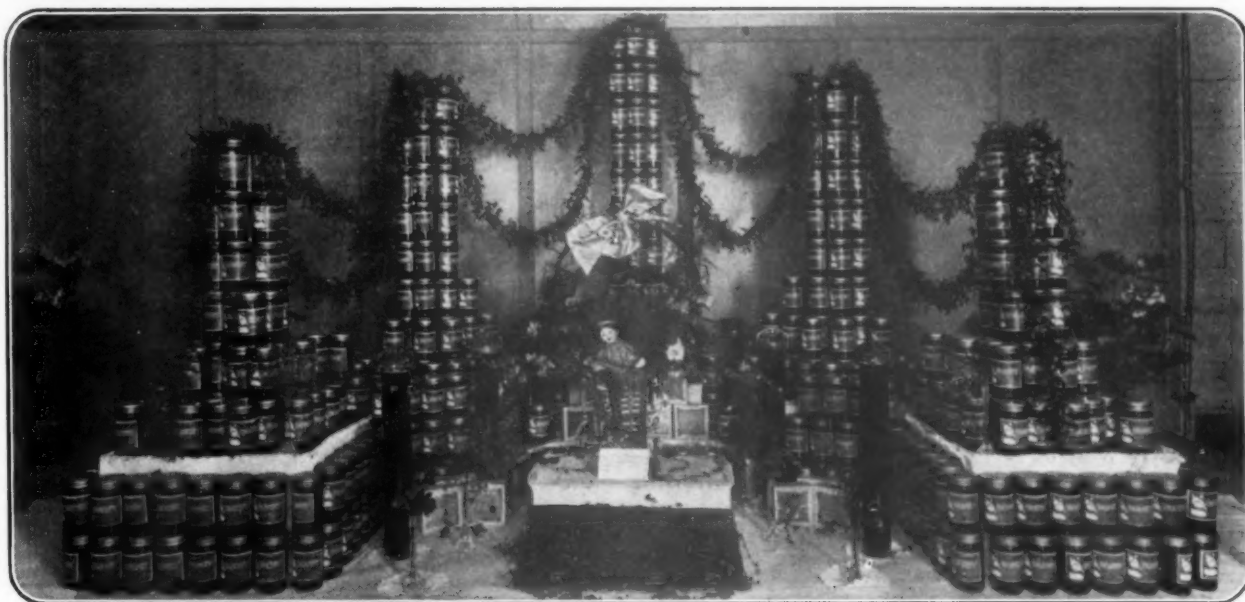
cent of the points for attractiveness in these big classes makes for much ingenuity and artistic effort in the arrangements.

There has never been so much variety in the honey as in the 1926 exhibit. A good spring flow allowed for large storing of nectar from the western broad-leaved maple (*Acer Macrophyllum*), and much of this maple-flavored honey was harvested in its purity, excellently flavored, in rich amber.

Alfalfa honey of first-rate quality



Right wing of the exhibit



500-pound exhibit of W. H. Turnbull, who took the \$100 prize over seven other competitors

came from the interior of the province. The Old Mills Apiary, of Ashcroft, sent down over 500 pounds which excelled all the coast samples, placing the big display second and winning the sweepstake of "most points in the show."

Various fruits, clovers and fire-weeds added to the variety, but some "mountain honey" from the Cascades, said to be chiefly heather, was judged to be the finest honey present.

A rule in the judging states that the prevailing color in the exhibition shall be taken as the standard. This allows for the variation in the harvest which occurs every year in the



W. H. Turnbull, whose exhibit won first prize

coast province, but there was a recommendation from the judges that "water white" should be emphasized. Mr. W. J. Sheppard and Mr. A. W. Finlay, provincial and assistant apiarists, adjudicated, with the help of Dr. Hill, analyst for the dominion government.

Section honey will be encouraged in the future by the offer of \$100 for the finest product in this class. The prize money already allotted is over \$800, and so pleased is the directorate of the exhibition with the honey display every year that a banquet is tendered to the bee folk on Wednesday of the fair week.



500-pound exhibit of Old Mills Apiary, second prize winner

# Paving the Way For National Advertising

By Natt Noyes Dodge

CONSIDERABLE interest and no little discussion seems to have been aroused among the beekeepers of the United States by the article by S. F. Lawrence which appeared in the July issue of the *American Bee Journal* regarding the national advertising of honey. Mr. Lawrence has a number of staunch supporters in the honey-producing fraternity, and has undoubtedly by this time discovered that there are not a few who do not agree with his ideas. The majority of the latter base their opinions on the ground that it will be impossible to raise, from among beekeepers, a sum huge enough to establish and maintain an advertising campaign of national proportions. Their stand is based upon the knowledge that, with the small profits to be made in the honey game, few bee men have very much surplus to invest in any proposition, and those who have are loath to do so until they are confident of its success.

On page ten of the August number of "Better Fruit" is the beginning of an article devoted to a discussion of commodity advertising. It would be well if every person interested in the honey-marketing problem could read this article, which is written by Mathew Tobriner, who is co-author with Prof. E. G. Mears, of Stanford University, of the most recent work on cooperative marketing, entitled, "Principles and Practices of Cooperative Marketing." Mr. Tobriner gives some very interesting figures in support of what commodity advertising has done for the citrus fruit industry, for the raisin and prune growers, for pineapple and pear producers, and for sauerkraut manufacturers, greeting-card distributors, and the like. The keynote of his article lies in the idea of producers or manufacturers, in a certain industry, organizing for the purpose of advertising the merits of their mutual commodity, in contrast to the practice now in vogue whereby each company advertises the merits of its own particular brand. As a result of commodity advertising in the California fruit industry, we now have the "Sunmaid" raisin and the "Sunkist" orange, brand names, it is true, but the brand of a close organization composed of many individual producers, all banded together and advertising the healthful results of eating oranges and raisins. How much better this is for all concerned than a bevy of advertisements, each pointing out the merits of a particular brand of raisin or orange, and all failing to advertise the merits of

the commodity itself. This latter method is an attempt to attract the market which exists, while the former is designed to form new markets by creating more consumers.

But how does all of this apply to honey? Viewed from one angle, a close comparison may be seen, for honey is a food of many merits, and is now in much the same economic condition as were oranges and sauerkraut before they enjoyed the advantages of commodity advertising. But here the comparison must be dropped, for oranges are produced in two or three centralized districts, in each of which the growers are all, as it were, within speaking distance of one another, and sauerkraut is a manufactured product and is marketed by a relatively few distributors. Honey, on the other hand, is produced in commercial quantities in almost every state of the Union, not to mention Canada, and is marketed by many of the various producers themselves, together with commission houses, fruit distributors, wholesale grocers, packers of marmalade, jelly, mayonnaise, peanut butter, and every Tom, Dick, and Harry who can possibly find some excuse for handling it, and a lot of others who can't.

This regrettable condition has resulted in the congested markets which we find at the present time, which is made worse by a wide variation in quality and price such that the consuming public is now completely bewildered, has lost interest and turned to other fields in which producers and manufacturers, such as those of table syrup and corn sugar, are eager to set before them the more or less deserved merits of their commodities. In other words, the honey industry is out of control and is running away with itself, and unless it is taken in hand in the very near future it seems in great danger of running into the ground. The orange and raisin producers, however, have control of their products, and by proper management and carefully planned advertising campaigns have not only stabilized the price and protected the quality, but have doubled and trebled their markets, lengthened their selling season, discovered and taught the public new uses for their products, developed better methods of packing and shipping, and incidentally lowered the prices to the consumer while making more money for themselves.

Why cannot this be done with honey? It can! The question is how to go about it. Mr. Lawrence is on

the right track, but he seems to have gotten off on the wrong foot. It is the writer's belief that national advertising under the present condition of the honey market would be a waste of money, even though the beekeepers could raise it, which seems rather improbable. Such advertising would, no doubt, increase the demand for honey to some extent, but with the great lack of uniformity in quality and price, together with the wide variety of containers and brands, ideas advanced by advertising would be so hindered in pushing through the mass of opposing factors that the ratio of "hits" would be far too low to be profitable. (In a city of 315,000 population, the writer has found on the market thirty-four brands of honey, wide extremes of quality, and a variation in price ranging from 79c to \$1.25 for five-pound pails.)

It would seem as if there were but two ways out of the difficulty. One is the natural result of the modern trend of business centralization. As a result of "mergers," a few large oil companies supply our motor vehicles with fuel and lubricants; the chain stores are gradually getting control of the retail grocery field, for with modern methods of business, large scale enterprises are the ones to survive. If the present practices of cut-throat marketing persist, more and more beekeepers will be forced to give up their chosen field to go into more remunerative pursuits. Their bees and equipment will be bought up by others more favorably situated, and a few of the larger producers will gain control of the industry in the various districts. Seeing the value of organized effort, they will combine to form honey companies. As these companies expand, certain grades and containers will, either automatically or through trade agreements, be established. In this way the marketing of honey will be stabilized, and the consumption of the product increased through modern methods of commercial commodity advertising. But the small, independent, commercial beekeeper of today will become a thing of the past.

The other solution to the problem lies in the active organizing of beekeepers into cooperative groups which will centralize as a producers' organization to control the honey BEFORE it goes to the packer. This control is essential, whether the producers' organization is to do the packing and distributing, or whether it will sell



to commercial packers and distributors. Once the control of the honey of the nation is in the hands of the beekeepers, where it rightfully belongs, the problem will have been solved, provided the situation is properly handled. Grades must be established and a price scale fixed accordingly, for inferior grades of honey and price cutting are at the bottom of present conditions. This means that something must be done to regulate honey importation, for with the spoiling of our fine home product by blending with it the tar and molasses of the tropics, little can be done toward convincing the public that honey really does taste good.

Certain sizes of containers must be established as standards, for the present system of trying to find the jar that looks the largest and holds the least is developing into a frenzy of competition among commercial bottlers. If distributing is to be done by the producers' organization, then a brand must be devised so that all of the housewife's fears and prejudices may be banished by the name "Beekist" or "Flowermaid" on the package of honey. Then, and NOT UNTIL THEN, will it be time to advertise. If beekeepers the country over can organize, and can so control their product as to establish definite grades, containers, and prices, there is little doubt as to their ability to then raise sufficient money to start advertising.

National advertising should not come at once, but should grow. One city must be singled out, its problems studied, and an intense advertising barrage laid down, its attacks aimed directly at the particular problems of the individual city. When this stronghold of the enemy is captured and all of its inhabitants are eating honey, the pressure may be applied to another city, and then to others. States can be handled in the same way as the campaign gathers momentum. But it must be done by degrees, slowly and gradually, for a firm foundation is not built overnight. Just as the roof cannot be built and a house put up under it, so national advertising must start at the bottom and build upward, and just as the way is paved for the construction of a house by digging the cellar and building the foundation, so must a way be paved for national advertising through the organizing of beekeepers, and the establishing of grades, containers, and prices.

Honey producers must stand together. Practical ideas must be fixed and agreed upon. Internal dissension in our ranks means victory for competitive products such as syrup and corn sugar. One man can eat only a certain amount of food, and

only a part of that is a sweet. It remains for the honey producers to determine whether that sweet will be honey or whether it will be some inferior article destined to shorten life and bring in its train a long list of ills. Will the honey producers accept that challenge?

Washington.

## Bees In China

Old Chinese Agricultural Book.

Quotations from "Ching Shih Ning Shie."

He said to cut out honey in October, when the weather is getting cold; when the flowers are falling, one ought to open the back door of the beehive and burn sedges in order to smoke them. By so doing the bees will fly forward; in case you are afraid of stings, use mint leaves, chewing in the mouth and then spread on hands. By such a layer of mint on top, you will get rid of the trouble of stinging. Another way to do it is to use a piece of netting wrapped around your head and the upper part of your body. It will be still better if you put on gloves. Leave enough honey to keep the bees going from winter to spring, and take the rest by cutting with sharp knife. After the honey is taken out, close the hive again. The honey obtained by whirling around, without fire, is the "white, sandy grained honey." The one taken with fire is known as "purple honey." Then put the honey obtained from whirling into a pot and boil it slowly; when melted, mix it thoroughly with a wooden stick and boil again. Previous to these operations a sort of tin container or masonry barrel filled with cold water is arranged by the side, so that after the second boiling you can pour the honey right into the containers, which will crystallize like yellow wax, until complete crystallization takes place.

If you want to know the crop of honey of the year in regard to quantity, you can tell by looking at the rainfall of the year. If the rainfall is uniform and the flowers are vigorous you are sure to have more honey produced. If there is a lack of rainfall, then, consequently, there is a shortage of flowers and trees and you are sure to have less honey in that year. In case the honey supply is not enough for the use of the bees, you can take one chicken or two with the feathers plucked off and the internal organs out and hang the chicken up in the hive. Then naturally the bees will eat the chicken and thus strengthen their vitality. When the next spring comes, open the door of the hive in February and you will find there are only bones left.

Mr. Shen Hu said "If you take too much honey out in the winter months,

the bees will be hungry. If this is the case, you may boil some spring chicken and put it by the side of the hive and feed them."

Verbal translation by Kerwin Chang.

Written by Hsu Kwan Chi 293 years ago.

(We are indebted to Professor Jager, of the College of Agriculture of Minnesota, for the above translation. Professor Jager sent us several such translations which will be published from time to time. The chewing of mint leaves and spreading them upon the hands is a new thing to us. The chicken fed to the bees in place of honey is a thing we have heard before. But it has never been mentioned by any of the better writers and it is probable that the man who advises it never tried it himself.

A very interesting thing which the Chinaman recommends is the "whirling around" to obtain the better honey. They evidently missed but little of learning how to extract it and save the comb as we do now.—Editor.)

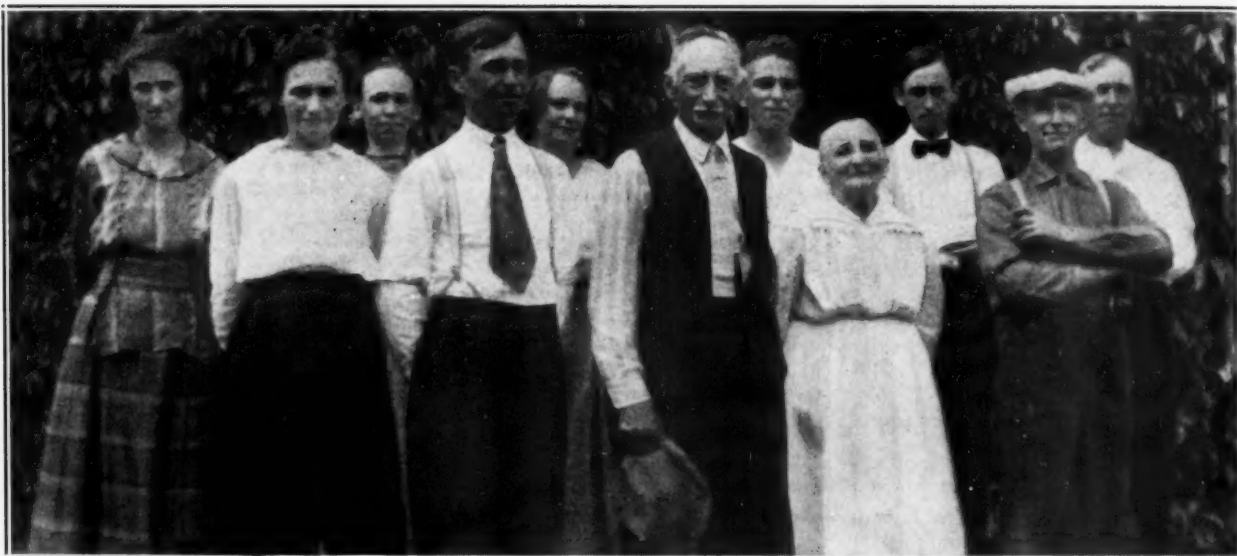
## The Big Hive In England

I frankly admit that I never could get a decent average surplus with B. S. hives, whether worked double or single, and I gave up trying. I found that with larger hives I did better, but still not well; with larger hives on the American system I did well, but by means of Mr. Dadant's system and hive I have come to half satisfy myself. The difference in yield is so enormous that I feel that I must perforce scrap everything else as soon as may be. Never before have I noticed the vast difference so plainly as this year, which has been a poor one. The surplus from Dadant hives has been far more than double that of the smaller ones.—R. B. Manley in Bee Craft.

## Mixed Loads of Pollen

In the September-October Bee World, Annie D. Betts has an article on "The Honeybee and Flower Evolution," in which she says that only about one bee in twenty brings home a mixed load of pollen. After careful examination of about 1500 pollen samples, she found that 6.75 per cent were loads of two or more kinds of pollen.

It is a well known fact that worker bees when afield stick pretty closely to one kind of flower when there is an abundance of bloom. Cases where they visit more than one kind of flower on a field trip are probably much more common in localities where there is no large amount of bloom of a single plant which is attractive to them.



Henry Behrens and family (one daughter absent). Cattle rancher and beekeeper, with thirty-two grandchildren

## Honey Production In South Dakota

Notes About the Bee Pasture and Beekeepers of a State Where Beekeeping Is a New Enterprise

By Frank C. Pellett

**S**OUTH DAKOTA has areas of the best bee pasture and also some of the poorest. There are locations where honey production cannot be excelled, and other parts of the state offer such poor pasture that bees can scarcely maintain themselves. As in North Dakota, sweet clover is the important factor. Where it is grown in large acreage the bees do well, and where it is not present we seldom find much for the bees. South Dakota, however, has made a great contribution to the prosperity of the beekeeping industry in the introduction of hardy forage crops through the College of Agriculture. The man who has done the work is not a beekeeper, yet few men have done as much for the industry as he.

Prof. N. E. Hansen, of Brookings, is a great leader in plant breeding. He has made many trips to far places in an effort to find hardy plants suited to the climate of the wind-swept plains. From Russia, Siberia and north China he has brought forage plants, hardy fruits and flowers, and established them in South Dakota. Those which have done well here he has used as parents in his plant-breeding work or has introduced them to the farmers of the state. As a result of his work many fine fruits are to be found on the farms of the Northwest, where a generation ago only sand cherries and buffalo berries were to be had. He crossed the hardy sand cherry of the plains with the high quality Japanese plums and produced new



Prof. N. E. Hansen has rendered great service to the beekeeping industry by the introduction of hardy forage plants.

fruits with the hardiness of the one and the quality of the other. Millions of seedlings have been grown in an attempt to find new and better things suited to a region of severe climatic changes and light rainfall. The success that has already attended these efforts is worth many times the money spent for the support of the entire agricultural college.

Space will not permit mention of all the interesting things which have been done with plants by Professor Hansen. His ten acres of roses, all

grown from seed of selected crossing, is worth a story all by itself. He finds it necessary to grow from a hundred thousand to a half million seedlings to find one new one worthy of propagation. So far only two new roses, the Tetonkaha and the Tegala, have been offered to the public as a result of this work. Apples, pears, plums, cherries, berries and flowers, all receive attention on the South Dakota plant-breeding grounds.

The thing of special interest to our readers, however, is the part which Hansen has had in improving the bee pasture of the western states. He brought from Semipalatinsk, Siberia, a sweet clover which grows well in a region with only eight inches of annual rainfall and temperature changes ranging from 50 degrees below zero to more than 100 above, Fahr. This sweet clover, known as the Hansen, should be secured by every beekeeper in the arid regions of our western states. It will grow where the common sweet clover cannot survive and provide bee pasture in sections where no bees can now be kept. It is hardy also in the far north and has been widely distributed in western Canada under the name of "Arctic" sweet clover. It does well in sections so far north that the common kinds winterkill, thus greatly extending the honey-producing areas to the north as well as to the west. From the same region he brought the Semipalatinsk alfalfa, which succeeds in regions too dry for other alfalfas to

grow. Hansen seems to be one to whom the ancient prophecy referred when it was said, "the desert shall blossom as the rose," for he is literally bringing it to pass.

From European Russia, a region colder than South Dakota, he brought the Cossack alfalfa, one of the hardest generally introduced. The past summer was very dry in parts of South Dakota. In driving over the state I was greatly impressed by the fields of this alfalfa in neighborhoods where other crops had been nearly destroyed by the drouth. Farmers with fields of Cossack alfalfa had feed for their animals and pasture for their bees, where all around fields were bare and burned. A season like the past one is sufficient to call general attention to these drouth-resisting crops which have been introduced, and we may expect a great increase in the acreage planted in the coming years. Wide distribution is being secured for promising forage crops by giving free a few seeds. Those who receive them can soon grow a considerable quantity by giving them careful attention.

#### The College Beekeeper

For some time past the College of Agriculture has been offering some work in beekeeping. The work so well started by Prof. R. M. Gilcrist is being continued by M. D. Farrar. Demonstration apiaries have been established and a course in beekeeping is offered at the college. By coordinating extension work with research and teaching, it is hoped to meet the needs of the industry. The extent of the work very naturally will depend much upon the interest



Mrs. Blackwell and daughter, the Blackwell Honey Company

manifested by the beekeepers. Farrar secured his training under Pad-dock, at the Iowa college. Since sweet clover is one of the important farm crops of the state, a timely experiment is under way to determine the extent to which the plant is dependent upon the honeybee in pollination.

#### Physical Features of South Dakota

Situated in the northern plains region, South Dakota has a climate of extremes of heat and cold, wet and drouth, yet it is rapidly becoming one of the best beekeeping states,

due to the increased acreage of sweet clover.

For the most part the state is composed of comparatively level prairie with rich soil. The general elevation east of the Missouri River is about 1500 feet above sea level. There is a rise westward to about 3200 feet at the eastern border of the Black Hills. This mountainous area rises to 6000 feet and at the highest 7200 feet.

The state as a whole is deficient in rainfall, the general average of the west half being slightly more than 18 inches annually, with about 22 inches in the eastern portion. Most of the precipitation usually comes in the growing months, from April until September, so that good crops are grown in normal seasons.

There are marked extremes of temperature. Days when the thermometer registers above 100 degrees Fahr., in summer, are not uncommon, and below zero temperatures in winter are frequent. The lowest recorded is 57 below zero, at Camp Cook, in the western end of the state.

The good beekeeping locations in the eastern half of the state are mostly confined to neighborhoods where sweet clover is grown. While alfalfa yields nectar in South Dakota, it is not equal to sweet clover in this region. Large yields from sweet clover are the rule where sufficient pasture is available. Since the acreage grown in rotation and also for pasture for livestock is rapidly increasing, the beekeeping possibilities in some sections are very promising.

#### Farmers Keep Bees

The change in agricultural practice in recent years has been marked.



Professor Farrar, of the College of Agriculture



Diversified farming is now the rule in many neighborhoods where grain farming was formerly followed. Folsland Brothers, at Oldham, are good examples of this change. The family for many years raised mostly wheat, until diminishing yields compelled a change. They began growing sweet clover to restore soil fertility. With sweet clover they decided to try a few bees. The bees did so well that they bought more and, at the end of their third year with bees, sold a car of comb honey. At the time of my visit last July they had 135 acres of sweet clover on their own farms and the bees were working in the supers. The flow usually lasts from June until frost. The year before they had averaged 200 pounds of comb honey per colony.

E. I. Underwood, of Willow Lake, has been there many years, having come in as a homesteader in advance of the railroad. He is a beekeeper at heart, having kept bees in the east in his boyhood. With the coming of sweet clover he took it up again and now has an extensive apiary. G. Lathrop, at Aberdeen, established a nursery and secured a few bees. The bees have done well for him and as a result he is expanding his bee business rather than his nursery, with the promise that eventually he will devote his entire attention to the bees.

So it goes, over the state. Wherever one finds a neighborhood where sweet clover is fully appreciated one also finds bees. In many places where no bees were present five years ago, there are now commercial apiaries and large scale honey production.

#### The Black Hills Region

In the Black Hills section, farming is confined to the rich valleys, but there is a much greater variety of nectar plants available. Because of the higher elevation there is more rainfall and a greater variety of native vegetation. The hills are covered with trees, mostly pines, with a rich undergrowth of shrubs and plants.

There is practically a continuous honeyflow in this area from the time growth starts in spring until frost kills vegetation in fall. Beginning with the pasque flower and early willows, the bees can find nectar every day when the weather will permit them to fly. Dandelion is abundant and blooms until the first white Dutch clover blossoms appear. White Dutch and alsike clover are abundant as well as sweet clover (*melilotus*) and alfalfa (*lucerne*), thus providing an abundant surplus pasturage. There are numerous native plants, such as vervain, catnip, Virginia creeper, wild cucumber, box elder, bearberry and gumweed, as well as heartsease

and goldenrod. Some of these plants are seldom visited by the bees because of the abundant sweet clover at the time they are blooming. Both white and yellow sweet clover are present. The Black Hills region is probably the best beekeeping region in South Dakota and seldom excelled elsewhere.

In other sections of the state there is a much smaller variety of plants on which the bees can build up, and in neighborhoods where sweet clover and alfalfa are not grown, as already mentioned, there is little for the bees.

There are some very capable beekeepers in this region. E. W. Fox, of Fruitdale, had three cars of honey last year. There are several producers in the Belle Fourche Valley who produce a carload or more of honey each year. I had heard much of the Blackwell Honey Company, at Rapid City, but was surprised to find a lady in charge. The men folks of the Blackwell family are engaged in other business, while Mrs. Blackwell and her daughter manage the bees, with some help during the busy season. Mrs. Blackwell started with a ten-dollar investment and sold 50,000 pounds of honey in 1925. Another good crop was in sight at the time of my visit.

Henry Behrens, of Hermosa, has the unusual combination of a cattle ranch and bee business. He is a naturalist who settled on the prairie in an early day. His collection of the birds and animals of the region is worth going far to see.

At the time of our visit to the Black Hills region the rodeo was in progress and it seemed that everybody was there. So many men whom we wished to see were not at home that we spent one afternoon at the show. It was a typically western event and would be worth a story in a magazine that had space for that kind of material. Because of it we probably missed seeing some bee men whom we might otherwise have met, but we enjoyed the show. Anyway, space will not permit mention of all the folks we did see.

#### Control of American Foulbrood

Mr. G. H. Vansel, of California, in Circular 307 of the California Agricultural Experiment Station, gives a very good description, with cuts, of American foulbrood and a method of treatment. Mr. Vansel is a reliable man and may be depended upon. He recommends the water-soap-formalin treatment for the combs, after the usual shaking. All cells, both brood and honey, must be uncapped. This is important, and

the honey must be thrown out by means of an extractor; then the remaining honey is removed by soaking for twelve hours in water. The solution recommended is: Soft water, four quarts, liquid soap, two ounces; formalin, one quart. The liquid soap is poured into the water. The formalin is then poured in and the mixture stirred. If hard water must be used, more soap is necessary.

The circular may be had from the Agricultural Experiment Station of Berkeley, California. It is certainly good and the details it gives are important.

#### New Zealand Honey Exports

The "Fruit World," of Australasia, quotes J. Rentoul, chairman of the Honey Control Board, with the statement that in 1915 the exports of New Zealand honey were only ten tons, while in 1925 the quantity totaled 780 tons.

This shows the possibilities of developing distant markets for a product when the home market no longer consumes all the output. New Zealanders go half way around the world to sell their honey in England. A small percentage of the returns from all honey sold in the export trade is retained by the control board for advertising.

#### Exports of Honey From Guatemala

According to data received in the Department of Commerce from Consul General Philip Holland, Guatemala, the exportation of honey from that country during the past six years has assumed an important position, as shown by the following figures:

Year	Pounds
1920	405,700
1921	611,300
1922	832,600
1923	1,289,700
1924	1,841,500
1925	1,550,400

#### Beekeeping In the New Near East

The "New Near East" Magazine, established some ten years ago, for the purpose of giving account of American relief in the Near East, gives, in its June, 1926, number, a number of pictures of new industries for the Near East. Among them is a picture of the teaching of bee culture at the Stepanavan Farm School, where up-to-date farming is taught. We notice that they use the Dadant hive and shallow supers. Armenia has many possibilities for bees, for all that region in the Caucasus and south of it is suitable for beekeeping.

# Transferring Bees In Texas

By R. R. Reppert, Entomologist,  
Extension Service, College Station, Texas

**I**N the spring of 1925 the Extension Service of Texas undertook work in transferring bees. Texas has no bee specialist, and what work is done along the lines of beekeeping must be done by the entomologist. Other entomological problems are so numerous that the work in beekeeping must therefore of necessity be slight, and not much of the state can be covered.

We were prompted to undertake this work, from a consideration of the profits for the individual producer and to minimize the menace of foulbrood over the state. It has been fully demonstrated in Texas that bees kept in modern hives produce far more honey than those kept in unsatisfactory quarters. The danger of the spread of foulbrood is becoming more generally understood also, and it was largely to aid the state's regulatory service in the eradication of this disease that the work was undertaken.

It was impossible to cover the entire state properly; consequently, in conference with the foulbrood inspection service, it was decided to concentrate efforts on four counties of north Texas where the possibilities of beekeeping were recognized and where there was a relatively large number of box hives. These counties were Denton, Collin, Tarrant, and Kaufman.

It was the idea of the entomologist at the outset to make a campaign of the move—to arouse interest among the beekeepers so that local effort would largely accomplish the results desired. To this end, beginning in February, short articles on beekeeping, along the lines of improvement and touching especially on the problems relating to transfer, were sent to all the papers of the state, with special admonition to the agents of the four counties mentioned to see that these articles were printed. These were run about every two weeks. Then about a month before the time when transfers might best be made, a letter was sent by the respective county agents of the four counties to their beekeepers, urging them to lend their support and influence to get all bees in the county transferred to modern hives by the end of April.

The results were not all that were expected and hoped for. In only one county, that of Denton, did the larger beekeepers become greatly interested. Here, however, they showed their appreciation of the value of the contemplated work by going out and

interesting the indifferent beekeeper to the extent of allowing a demonstration in bee transfer to be given in his yard. These same men at the time of the transfer were present and gave actual aid in the work.

The week of April 20 to April 25, inclusive—six days—was spent in



Old log gum,—a few of these are still found in Texas

giving these transfers in Denton county. Transfers were made in eleven yards, with a total of 225 persons present, representing ownership of 660 colonies of bees. Various questions on transferring and on other problems of beekeeping testified to the interest of those attending.

At the time set for the demonstrations, the section was afflicted with a severe drought. No nectar was available in the field, and it was feared that robbing would result. We attempted the work against what may yet prove our better judgment, because the appointments were out and we did not like to cancel this work without at least a trial. The only thing that prevented the expected robbing was the fact that an extremely high wind blew every day during the week. The bees all kept to the hive. In handling combs and frames, the wind would snatch bees from the comb and combs from our hands, and whirl them away. In a few of the colonies transferred, robbing took place later, and it is a question if, all things considered, it

would not have been wiser to have abandoned the demonstrations, since we fear the final results may react unfavorably and make it hard to get this work accomplished another season.

The method we used was that in which the bees are drummed into a box and dumped in front of a new empty hive, ready prepared, the desirable combs being then cut from the old hive and tied into empty frames to be placed in the new hive. This method was selected because we were working with men the majority of whom would not give later attention to the bees, and so we had to make the work complete while we were there that day, it being impossible to return for later manipulations. That the principal purpose of our campaign was accomplished, that of interesting the beekeepers in their own problems, was evident in several articles written by beekeepers and appearing in local publications, criticizing our method and outlining other improved methods that each particular writer had found best suited to his own conditions. This, of course, tended to arouse general interest in bee transfer and allowed an interchange of ideas; doubtless because of this many colonies were transferred of which we learned nothing.

It has not been decided yet to what extent this work will be pushed another season. Much depends upon the attitude of the up-to-date beekeepers. If there appears to be a demand for the work, and proper co-operation can be secured, a campaign will be attempted with the purpose of getting all bees, in some area to be agreed upon, perhaps over the entire state, housed in modern hives.

## The Treasures In a Drop of Honey

"I Tesori di una Goccia di Miele" is a very fine translation into the Italian language of the little French book by Alin Caillas, in its fourth edition. The translation is by Oddo Marinelli, of Ancona. It is supplied with twelve cuts from photos, one of which gives Mr. Caillas's portrait. Our readers are acquainted with Mr. Caillas's writings, some of which have appeared on pages 166 and 474 of 1925, as well as on page 226 of May, 1926. His book is worthy of translation. The only thing which has kept us from undertaking it for the English language is that all his analyses of honey have been made upon European honeys, French and Belgian. But a similar work in the English language, for American readers, would be welcome.

# Personal Recollections of the Editor

## Observing Hives

AN article on the occupations of worker bees in our Journal some time ago reminded me of how we confirmed and corroborated the statements of the scientists, and especially those of Dr. Donhoff, a German observer, whose experiments are mentioned in paragraphs 160 to 165 of "The Hive and Honeybee." We, too, had brought Italian bees to a neighborhood of black bees. My father, who was of an enquiring turn of mind, was very desirous of testing the statements of the former students. So he made an observing hive, with one comb. Many people had hives with glass sides, which they called "observing hives," but in such a hive, the glass being next to the outer frame, it was rare to be able to watch the queen and the actions of the bees in brood rearing. So the hive he made had one comb only, with glass on both sides, and shutters. I can still remember the first occasions to watch the bees at work. They become very soon accustomed to light being thrown upon them and keep on working as if nothing was the matter.

The first comb we used was a comb of black bees, brood in plenty and plenty of young bees. Then we introduced an Italian queen. It was delightful to see the emerging of the first young Italian workers, with their yellow rings, at the end of twenty-one days. After one has watched a colony in this way, one never makes the mistake of some old box-hive beekeepers, who, when they see a small, shiny bee, say that it is a young bee whose hairs have not yet grown. The young bees, just hatched, are hairy all over and have a weak, staggering aspect.

With that observing hive we could see not only the first emerging of the young yellow bees, but we could follow them from day to day in their actions. It was not quite in such detail as the German scientist reports, on bees that are marked individually, but it was quite sufficient to follow the occupations of the bees as they grow older and to ascertain that it is the young bees who feed the larvæ, who build the combs and who perform the occupations of the interior. We also ascertained, as the scientists had told us, that the first time a bee emerges from the hive, to take a flight, is usually when she is a week old at least, unless the circumstances should demand earlier flight, as for instance the departure of a swarm with most of the field workers. In such a case the young

bees appear to realize that they must mature earlier, and exert themselves. At the end of fourteen to eighteen days they become active field workers and rarely occupy themselves with indoor work, unless, as I said before, the natural conditions of the colony are upset by extraordinary happenings.

What is most interesting in an observing hive is watching the rearing of a queen. All one needs to do is to remove their queen. Then one notices the sorry appearance of the bees, who seem to mourn their loss. Then they begin preparations for replacing her by enlarging some cells around larvæ less than three days old. When the young queen is out of her cell, one can see her angrily tearing open the other queen cells and stinging their inmates.

Even when the little colony is hopelessly queenless, there is something to learn, for, sooner or later, laying workers begin their desperate attempt at replacing the missing queen by their own efforts at laying. I remember witnessing a dozen workers, or more, laying eggs at the same time, in cells that already contained numerous eggs.

There is no end to the information one can get out of an observing hive of this kind: the bringing in of pollen, packing it in the cells, feeding the brood, all this most especially if the bees have been encouraged in building cells against the glass, so that one may be able to see the bees at work in them or building them. It is an education of itself.

Not only can the apiarist observe all this, but if the observing hive is placed in a window, or on a back porch, where the bees are not likely to interfere with the family actions, they may be kept there for months, visitors may be induced to watch the work of the colony and derive much pleasure and information. I remember having a half dozen people watching an observing hive at the same time, and the exclamations of wonder when they could see the queen examining a cell, then inserting her abdomen in it to lay an egg.

It is not difficult to stock such an observing hive with bees, from almost any strong colony in the yard. When the season is over, all that needs to be done is to unite it with any colony, for it is difficult to winter an observing hive, in the climate of our middle states. But to derive the greatest amount of information from the study of such a hive, it is advisable to have the bees and brood,

with which it is stocked of one race, and the queen of another race, for we can then notice all the changes of occupation of workers without having to go to the trouble to mark them.

Beekeepers who wish to interest their children in the occupation of beekeeping cannot do better than secure an observing hive and stock it. They will see the young people flock around it. If there is any fear of stings, it is not difficult to arrange the hive so that the opening for the flight of the bees will be behind some sort of wall or shrub.

## Theodore Roosevelt On Wild Bees

"On the following day we made nineteen kilometres, the river twisting in every direction, but in its general course running a little west of north. Once we stopped at a bee tree, to get honey. The tree was a towering giant, of the kind called milk tree, because a thick, milky juice runs freely from any cut. Our camaradas eagerly drank the white fluid that flowed from the wounds made by their axes. I tried it. The taste was not unpleasant, but it left a sticky feeling in the mouth. The helmsman of my boat, Luiz, a powerful negro, chopped into the tree, balancing himself with a springy ease on a slight scaffolding. The honey was in a hollow, and had been made by medium-sized stingless bees. At the mouth of the hollow they had built a curious entrance of their own, in the shape of a spout of wax about a foot long. At the opening the walls of the spout showed the wax formation, but elsewhere it had become in color and texture indistinguishable from the bark of the tree. The honey was delicious, sweet and yet with a tart flavor. The comb differed much from that of our honeybees. The honey cells were very large, and the brood cells, which were small, were in a single instead of a double row." —"Through the Brazilian Wilderness," page 263.

## Be Original

Beekeepers do well to capitalize something peculiar to them, either in the name or location, in their advertising. Joe Kremenski, of Duluth, Minnesota, uses his initials. "J-Kay's Apiary" is printed in red at the top of his letterhead, and a big sign across his driveway likewise locates J-Kay's apiary.



# The Farmer's Health

By Elizabeth Cole

Solomon said many years ago, "Get knowledge, get wisdom, but with all thy getting, get understanding." That advice has held good for all the ages and it is just as applicable today as it was then. For of what use is all wisdom and all knowledge without an understanding of the whys and wherefores?

In the matter of health everybody nowadays is becoming more and more intelligent. We understand that without health all efforts in the way of worldly gain and advanced civilization are of slight account. As we become more informed about modern methods of farming and animal breeding, so do we understand better how to bring up our children. Not so long ago plagues came and destroyed our crops or infections killed our livestock. So also they took our families in the prime of life. We try now to catch early symptoms to prevent disease, and plagues are becoming quite out of date.

In rural parts of the country, as well as in the cities, we have come to realize the importance of having clean homes, clean bodies, clean barns and working places, and clean food. We know that flies breed in refuse, that mosquitoes come from stagnant water, that cattle with bovine tuberculosis can transmit this disease to human beings (and to animals) through their milk. We know that neglected teeth are often the cause of serious sickness and that diseased tonsils and adenoids may affect other parts of the body.

In the less thickly populated sections of the country it is not always easy to introduce progressive methods for health and comfort. Yet through the magazines, newspapers, and through such agencies as women's clubs, church groups, granges, societies of husbandmen and intelligent heads of families, the general health condition of farmers and agriculturists have been steadily improving. Public health nurses, traveling clinics, community playgrounds and county health officers are at work in many rural districts. The attitude of farmers toward the health of their growing boys and girls is so changing that it is now seldom necessary to convince a father that his child's food and health habits are as important as those of his pedigreed pig.

Bovine tuberculosis is being eradicated all over the country by having a better cooperation between cattle owners and the federal or state inspectors. In the state of New York, Governor Smith recently reported to the Legislature that last year over 50,000 herds, containing nearly 600,-

000 cattle, were subjected to the tuberculin test and that all tuberculous animals had been eliminated. In a group of 430,191 cattle that were tested by federal authorities in one month in 1923, a total of 14,604 reactors (or tuberculous cattle) were found.

In the program for better health the teacher can do much in her classroom to interest boys and girls in understanding the need for practicing good health habits. The county health officer, also, who oversees such health measures as disease control, general sanitation of public places, school and homes, malaria prevention, maternity hygiene and tuberculosis control, contributes the benefit of his experience and helps every interested member of his community.

It used to be said that people who lived in the country were more healthy than those who lived in the city. That is a question statistics only can answer. In New York State statistics show that while city and national mortality from tuberculosis has been practically cut in half since 1913, rural tuberculosis is declining very slowly. In 1924 the urban death rate from tuberculosis was 57.39 against the rural death rate, which was 105.35. This, of course, is showing the situation in just one state, but the consensus of opinion is that tuberculosis in the country is not being reduced as fast as it is in the cities.

A great reason for this is that many agriculturists neglect their health and allow their bodies to become run down physically. They forget that fresh air, rest, good food and relaxation are necessary to fortify against sickness. With plenty of fresh air all about, farmers often keep their homes stuffy and airless. At night the windows are not opened to let in one of the best germ preventives known, namely, fresh open air. The busy farmer often works too hard with insufficient rest. He eats his mid-day dinner hurriedly, and his diet is often made up of fried foods, pastry, and too little variety of meat and fresh vegetables. He rushes back to work after his big dinner and allows no time for proper digestion. Then, because of the long hours of work, the evenings or play times lack the sort of recreation that stimulates and lightens the mind and spirit. There is much truth in a new version of the old adage, "All work and no play makes Jack a sick boy." The bodily needs are apt to be neglected when hay time is on, or the crops must be gathered.

"That's all very well," you may

say, "but how can I with so little help do otherwise than work from sunrise to sundown?" Probably you will have to work harder at certain seasons, but when the rush period is over you can make a business of taking care of your health. You can get back to the normal life again with its proper amount of rest and relaxation.

If you would follow the advice of Solomon you will find out what your community is doing to protect your health and take an individual interest in the progress being made to get the best of sickness. Since 1904 the National Tuberculosis Association and its state and local associations have been carrying on an educational campaign to control tuberculosis. During that time the number of deaths from tuberculosis has decreased from 200 per 100,000 to 90.6 per 100,000 in 1924. Through understanding how tuberculosis can be prevented (as well as cured when taken in time) by having plenty of rest, fresh air, exercise, nourishing food and a periodic physical examination to keep track of one's general health, you can be a partner in their campaign. You can be a partner in December by buying and selling the Christmas health seals, the funds of which support their work.

## Latest Development In Miller Memorial Library

We have, to date, received approximately 5,200 single volumes of bee journals, books and pamphlets for the library; this, of course, includes many duplicates. But we have approximately 2,000 volumes of bee journals, some lacking one or two numbers, and approximately 1,400 numbers of books, pamphlets and separates, making a total of approximately 3,400 individual items. Cash donations to the value of \$3,358.76 have been received; \$2,000 of this is in the endowment fund. We are now receiving regularly 107 different bee journals from all parts of the world. While we probably do not have as large a number of volumes as is contained in one or two of the libraries in Europe, I am quite sure that we have the finest general collection of material in existence.

We have certainly reaped a rich harvest in the past eighteen months, and should the library continue to grow in even half this proportion during the next five years, we may feel that our work has been very satisfactorily taken care of.

The University Agricultural Library has just sent to the binder 459 186 bound volumes, at a cost of \$220.

H. F. Wilson, in Charge.

## THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

### WAXMOTHS AT OUTYARDS

I ran two outapiaries last summer besides a small yard at home. Being compelled to be absent from one apiary for a month, I found upon returning that waxmoths had gotten into some supers and destroyed the combs and had even eaten the wax to a large extent. The sides of the super were deeply scored from the grubs eating the wood. I am melting up what remains of the wax.

What methods do extensive beekeepers take to keep their combs from waxmoths at outapiaries during the hot season? If by the use of carbon bisulphide, how frequently is that done at outapiaries? I brought all my combs home and want to fumigate them, but I am in doubt whether to fumigate this autumn or wait until spring, as I understand cold weather, such as we have in Ontario, is sufficient to destroy moths and eggs. Will you particularly advise as to this? ONTARIO.

Answer.—In our northern climates, where the temperature goes many degrees below the freezing point, it is sufficient to keep combs in a room where the temperature is permitted to fall much below freezing, to entirely destroy all germs of the moths, whether eggs, larvae or millers, during the winter. In warm countries like our southern states, Mexico, Spain or Italy, this would not be sufficient. Hence there are many more moths in those warm countries than in the North. The only way in which the moths perpetuate in cold countries is through an occasional moth hatching in combs that have been wintered over in a living colony or in a warm room. It is this occasional moth which causes the havoc mentioned.

The trouble, in your case, was probably in having kept those supers, exposed, in the apiary or in a room that was warm all winter. It is not sufficient to keep supers closed, for the moths lay their eggs along the joints of the boxes, and the young larvae, as soon as hatched, "worm" their way into the box, feeding as they go. They eat especially the cast-off skins and cocoons of the bee larvae, the pollen, if there is any, the wax, and even some of the wood. They cannot feed upon pure wax only.

The experiments of Mr. Paddock, when he was State Entomologist of Texas, showed a great variation in the duration of the development of the moth, according to the temperature, the egg state lasting from five to twenty-seven days, the larval state from thirty to one hundred and forty days, the pupal state from six to fifty-five days. The fast stages are, of course, in summer. In hot weather it probably takes less than six weeks to bring an egg to moth.

When you put away supers that have been on the hive, you should always take it for granted that there may be some moth eggs in or about them and treat them for moths, with carbon disulphide, carbon tetrachloride, or burning brimstone. As we have no very clear evidence that the treatment destroys the eggs, it is a good plan to treat them again in a week or ten days. During the entire time, these combs must be kept in a moth-proof room. It is not difficult to make a room moth-proof. Line it on the inside with tar-paper. But make sure also that there are no living moths in it before bringing in your combs. We have never

lost combs from moths without realizing that it was our fault.

In this latitude, the 40°, the moths make three broods in a season. The first millers appear in May-June, the second in July-August, the third in October. If we are careful and have no queenless or weak colonies, we need have but little fear of their spread; but if we are careless, since the female lays some 300 to 400 eggs and may lay 1100 (Paddock), at the end of the third brood there will be enough moths in a small apiary to stock the entire continent of North America.

The supers may be kept out-of-doors if they are so protected that the moths may not lay eggs along the joints. Strips of heavy paper, glued upon the joints, may be sufficient. Or they may be done up in tarred paper, which would probably repel the moths.

For a method of treatment of the combs, we cannot give a better one than that given in our March, 1920, number, page 90, by W. S. Pangburn, entitled "To the Rescue of Dr. Miller." This article might be repeated, if our readers wish it. Some articles bear repeating. Twenty years in succession, Doolittle gave, in the American Bee Journal, his method of preparing sugar syrup, and the readers did not appear to tire of it.

### WINTERING DETAILS

I have fifteen swarms of bees and would like to know how to winter them. I have a full hive body, ten frames full of honey, for each hive. Do you think it pays to pack bees in boxes in this climate where they are in two-story hives and one of them full of honey? Last year I packed my bees in boxes and used sawdust for packing. I had them in water-tight boxes with paper roof on them, and when I went into the hives last spring the combs were moldy. What do you think was the cause? I had six inches of packing around them. My queens are all young and in good shape. If your advice is to use packing, should I put the packing in on top of the plain hive cover? Or would it be better to use a burlap or gunny sack right next to the cluster and put the packing on the gunny sack without a hive cover and then put a good paper roof over all? My bees have stored more honey than any that I know of around in this country, and I don't know whether it was the packing that I gave them last year; that is why I would like to know what you think about packing bees here in the southern part of Illinois.

### ILLINOIS.

Answer.—Packing is not indispensable in your locality, but when the colonies are packed it protects them against cold weather and they often breed more rapidly in spring. That is probably why your colonies were ahead of your neighbors' bees.

The reason why you found combs mouldy is that you did not have enough room for ventilation. It is well to leave plenty of entrance room for the bees to ventilate. Also, it is best not to put a tight cover on the colony below the packing, but just have a gunny sack or some quilts, then the packing, then a cover on top of the whole.

The bees should have ventilation enough so that they may know when the weather is mild and take a flight. The worst feature of packing in as mild a locality as southern

Illinois is that the bees are sometimes packed so that they do not know when the weather is mild enough for them to have a flight, then they suffer from dampness and sometimes from confinement. If the packing keeps them warm, but does not prevent the moisture from escaping and the bees from flying, the conditions are ideal for good wintering.

### USED SECTIONS, ETC.

1. Is it advisable to use honey sections the second time, by cleaning them and using them again? If not, why?

2. I have seven hives I bought recently, without any frames. They are 18½x14½x9½ inches. How much space is required between frame and bottom? I expect to make these frames.

3. Is it advisable to place comb foundation, full size, in all ten frames before the new swarm enters?

4. How long after the new swarm is in is it advisable to put on super sections? INDIANA.

Answers.—1. Honey sections may be used again, if for home consumption. It is usually impossible to clean them sufficiently for them not to look second-hand when filled and offered for sale. The difference in price obtained would probably make the cost of the old sections too great.

2. The bees can get along with as little as ½ of space between bottom of frame and bottom of hive. More space will not hurt if it does not go over about one-half inch. But your hives appear to be the regular Langstroth, intended for ordinary Langstroth frames.

3. Yes, of course, it is best to give a new swarm either built combs or foundation.

4. Putting on the supers should depend upon the amount of work done by the bees. It is useless to give them supers until the combs below are fairly well filled with brood and honey. Often it requires less than a week, but sometimes they do not fill the brood chamber till fall, if the season is unfavorable.

### BEEES IN CELLAR

Our two swarms are in a dry cellar in the north slope of a deep-wooded coulee, facing the south. It is about eight feet long and four feet under ground where the hives are. They are packed in a dry goods box with leaves, and then covered with oil-cloth. They have about a one-fourth-inch tunnel in front of the hive. The party in charge says he is sure they are all right, from the hum. The temperature ranges from about 30 to 40. So he thinks they will not need a cleaning flight, being put in the middle of November. They are in ten-frame modified Dadant hive, and weighed eighty pounds each early in the fall. What do you think we should expect from them by spring? NORTH DAKOTA.

Answer.—I believe the cellar is all right; but I would prefer the temperature to be a little higher, say about 45 degrees. But perhaps you do not have a thermometer and the temperature may be higher than you surmise. When the temperature is right, the noise the bees make is an exceedingly low and quiet hum.

### BEEES IN GREENHOUSE

Will it be right to place three colonies of bees in a greenhouse about 20x30 feet and feed them right along in the winter and increase them if necessary? TORONTO.

Answer.—I must say plainly that I do not know how it will work, because I have never seen it tried. But, as a rule, colonies which are kept in greenhouses lose many bees on account of their worrying themselves against the glass, trying to fly farther. So I would be inclined to think that colonies thus

treated would not be very prosperous. But I have seen colonies thrive in a greenhouse when they were so placed that they could fly out and in at liberty and not within the greenhouse. In that case they do not fly when the weather is unsuitable. Whether there would be enough warm days in Toronto to justify their breeding early is a matter that I cannot decide. But I know from personal experience that bees kept in the warmth of a greenhouse, that have as much honey as they need, will come out of winter in very fine condition and increase rapidly in spring.

#### 12-13 FRAME HIVE

I should be pleased if you would tell me the objections to the square 12-13-frame Jumbo, especially in comparison to the 10-frame Dadant hive. ENGLAND.

Answer.—The 12-13-frame Jumbo is a good hive, used by Mr. Holtermann in Canada, and others. The principal objection which we have to it is that it spreads the cluster over too many combs. Its capacity is about that of a 9-10-frame Dadant, with three additional combs for the bees to cluster in. We prefer a less number of combs, which gives a more compact hive.

#### CELLAR VENTILATION

It is a well known fact that bees need much more air the first week or two after being placed in the bee cave than they do the rest of the winter. If one ventilator in, say, southeast corner of cave just comes through the roof, and one at southwest corner comes to within three inches of cave floor, will there be a free circulation of air? After the bees get quiet, then shut the short ventilator, of course. IOWA.

Answer.—Yes, if the ventilator which is supposed to take the air out of the cellar has its intake pretty high up, inside, and the other takes the air from low down outside, there will be enough difference in temperature between the inside and outside to make a draft for the foul air to come out, even if that foul air is likely to be a little heavier than warm pure air. If the lower ventilator is horizontal, it will be still better for ventilation. Very little ventilation is required. But if the ventilators are small, I would leave them open. We used ventilators not over two inches in diameter and never had any trouble.

#### WINTERING IN HOUSE

I have an empty house in a very good location in the edge of this city and wish to know if I can make good use of this house as a safe place for several colonies of bees? There are several windows in this house and it is also of frame construction, two stories. Will it be possible, by using bee escapes in the windows, to put several colonies inside just even with the lower part of each window and make a small opening and a covered runway to each hive? I could also make beeways through the weatherboards for some colonies, if necessary. I could lock my house and they would be safe, and I could also take care of the hives from the inside. Would the bees that got out from the top of the hive get confused and not go out through the bee escapes in the windows? If this will work it will save packing for winter. KANSAS.

Answer.—I believe a house can be used for the purpose you mention if it is not available for renting.

I would place hives at the windows, two to each window, side by side, and I would make some sort of closed passage between the hives and the window, with the lower window frame slightly raised and a partition in it. I do not believe that the bees of each hive would interfere with those of the other, if their passages were separate.

Holes and passages could also be made in the walls of the house, as you describe.

To let the bees out when you would examine them, I would simply lower the upper sash a few inches, for the time being. A house like that, especially if the hives faced the south, would be quite convenient for wintering.

#### HONEY AS ANTI-FREEZE SOLUTION

I am writing you to ask you what results you had with honey in the radiator of your cars as a non-freezing solution. Could you tell me how to mix it all ready to pour into the radiator? IOWA

Answer.—From all the information gathered, it appears that if honey is mixed, half and half, with water, and thoroughly heated to the boiling point, kept at that point about ten minutes, then skimmed and mixed with about 20 per cent of its volume of alcohol, it makes a very satisfactory mixture, the alcohol evaporating much more slowly than when mixed with pure water and the honey being much less subject to leakage through joints. However, it is a very important point to make sure of all connections where a leak might occur. A mixture of this kind lasts a long time in the coldest weather, as the evaporation is much less rapid than that of water and alcohol. As the honey cannot evaporate, the addition should always be of pure water, with an occasional dose of alcohol.

#### SPACING

Which do you regard as the more desirable, a Jumbo hive with ten (10) frames spaced 1 1/2 inches or nine (9) frames spaced 1 1/4 inches? N. J.

Answer.—Neither is very satisfactory to me, but I believe I would prefer the nine frames with the wider spacing.

### The Last Love

On the decline of the long pilgrimage, the old farmer still loves to direct his tottering steps towards the blooming fields and watch his staff at work. As his strength goes diminishing, he must content himself with short sallies around the home, then pass entire days seated upon a bench, happy to be still able to watch that which was his joy, his family, his surroundings, the garden, the cattle merging from the barn. Some day he will be unable to do even this: Lying upon the family bed, he will recall his past. This love of his profession the beekeeper possesses in a high degree.

The past winter, after a painful operation, I was compelled to cease all activity and spend an endless number of days waiting for a slow-coming cure. Oh, what long, sleepless nights in a hospital room! And do you know what constant thoughts tortured me? Who will care for my bees? We have some sons in the home, but one always wants to do everything himself and I did not have the forethought of initiating one of them in the care of the apiary. Dear brother beekeepers, remember that a well-advised practitioner must bear in mind that, some day, he will need a helper and that the education of

this foreman must be undertaken as early as possible.

At last I returned home during a marvelous spring day. What a joy to be again among one's own people! But something is lacking for complete happiness. You are guessing it. The following day, instead of spending the forenoon in bed in obedience to the doctor's orders, I painfully climbed into the tramway car and, after a few minutes of hesitating steps, I at last found myself among my dear bees, my friends of forty years.

It was a second happy return home. Stirred up, happy to be still alive, I sat among the hives and glanced back upon the long years past. How many things I have seen! The enthusiasm of the first years never waned. Thirty to forty two-hour trips every year, to my apiary in the woods, with all the comical or interesting incidents!

By the side of these happy thoughts many painful recollections: Foulbrood in 1909, when twelve colonies had to be burnt up; a fire by lightning in 1911, when I lost more, without insurance, owing to my neglect. Since that time other troubles have come, but, in spite of it all, bravery comes back to me, with health, with life. An immense happiness fills my whole being. Oh, my dear bees! Can one remain prostrated in the face of your feverish activity? Let me stand up to the end of the voyage of life. Happy days may still shine. I returned home almost alert and again found my large family.

"Look at papa," said the youngest. "He went off half bent, limping in both legs, and here he comes with a smile and walking four miles per hour!"

"It's not astonishing," said mamma, "he's just been at his apiary."

H. Berger

(Bulletin of the Society Romande of Apiculture, Switzerland.)

(We visited this enthusiastic beekeeper in 1913 and an account of our visit was published in the June number, 1914, of the American Bee Journal.—Editor.)

### Honey In Candy Sold In Schools

Honey is used in the confectionery sold in over ninety California schools, and made by the Los Angeles Fruit Products Company of San Gabriel, according to a confectionery trade paper. No glucose or substitutes whatever are used. The line is made up of chocolate-coated fruit bars, candied grape fruit peel and stuffed and candied fruits.



## THE BEEKEEPER'S LOOKOUT

### How Does a "Katydid"?



Did you ever wonder, on a warm afternoon in late summer or early autumn, how the insects make the various noises which fill the air? Crickets, grasshoppers and katydids all contribute something to the orchestra which blends the various notes into a harmonious, though not very musical, serenade.

The green grasshoppers are the most persistent and abundant of these insect musicians in my neighborhood. I have caged several pairs of them in my study just to listen to their fiddling and to observe how they do it. Fiddling, however, is not quite the proper word in the case of the green grasshoppers, for they do not use a bow. At the base of the wings of the males there are thin, chitinous covers which serve as instruments for making all the music. The edge of one seems to be scraped against the edge or under side of the other, sounding somewhat after the manner of a file on the edge of a saw. Sometimes the insect makes a series of short buzzing notes; again he continues with long stretches of z z z z z z zt, z z z z z z zt, rising and falling at different stages of the sound. One species, which feeds in the trees, makes a distinct "Katydid," "Katydid," repeated with monotonous regularity.

Now then, will someone who has observed carefully, tell us just how the queenbee makes her piping call? Insects have no vocal organs such as we know in the higher animals. Sounds are made in various ways, but just how the queen makes the sound when she pipes I have never been able to observe for myself. Let us hear from someone who has.

#### Another Bird Picture

C. H. Watson, of Andover, New York, sends the picture of the little Saw-Whet Owl, one of the smallest and least known of the owls. It is not much bigger than a robin and too small to do any harm, if it tried. Concerning it, Watson writes:

"This little owl kills the mice that destroy the grasses, that produce the pollen, that feeds the larvæ, that make the bees, that gather the honey by which we increase our bank accounts. How much more satisfactory to photograph him than to shoot him!"



#### About Persimmon Trees

A Nebraska subscriber asks where he can secure persimmon trees. Almost any of the larger nurseries sell them. I have a persimmon tree on my farm, near Atlantic, Iowa, which is now about ten years old. The persimmon is a fine source of honey as well as of very good fruit, and should be grown much more generally than it is. The trees are rather difficult to transplant, but once started should do well. Since the staminate blossoms occur on one tree and the pistillate on another, several trees are necessary to insure fruit. No wild trees are known to occur within a hundred miles of Atlantic, but my tree has done so well that I would not hesitate to advise the Nebraska friend to try planting persimmons.

Frank C. Pellett.

#### About Snakes and Toads

I am glad that Frank C. Pellett, who writes so beautifully and interestingly about our wildwood flowers and little creatures, has spoken a good word for the gartersnakes. I, too, have several families of these harmless snakes about my place, and we protect them.

My little granddaughter, Alice, takes up the little ones in her hands, pets them as she does little puppies and kittens, and I am sure they appreciate friendship.

I have watched these snakes for many years past. I have often seen them sunning themselves on the entrance boards of the hives, but never saw one take a bee, either live or dead. It would not be healthy for their soft mouths. They would surely get stung, and they know it. A snake is no fool.

We consider them great insect destroyers. They will get frogs and toads if they can catch them, and that is to be regretted, for the toad is a wonderful insect destroyer. The cutworm works at night. So does the toad, and the quantity he destroys is enormous. Toads live to be forty years old. They will make their home in your garden and stay with you from year to year into the next generation. I bring them home with me from a distance if I find a good big one, and give it a place among the shrubs or in the garden. They burrow just under the surface of the soil in the daytime.

I have heard it said that they eat bees. I shall not believe it till I see them do it, because I have been watching to see if it could be verified. I am inclined to think that if a young toad should try to gulp up a live bee with its little scoopshovel it would surely get stung in its soft mouth and would not try it again for at least thirty and nine years.

Stephen J. Harmeling,  
Washington.

#### About Alfalfa

Professor Vansell of the California University is asking for answers to the following questions about alfalfa in an attempt to secure information about the conditions under which it yields nectar:

Name of observer.

Vicinity.

Location as to slope, prevailing wind, distance from ocean, etc.

Do you notice any variation in color of alfalfa honey in a given locality?

Time of maximum nectar yield. Which crop?

How does irrigation affect the flow of nectar?

What weather conditions do you consider most favorable for nectar secretion in alfalfa?

Does the variety of alfalfa grown have a bearing on nectar secretion?

Remarks recording any further observations concerning alfalfa as a nectar plant.

Kind of soil—i. e., adobe, sand, loam, etc.

## Meetings and Events

### North Dakota Meet at Fargo, Jan. 31-Feb. 5

The date for the annual meeting of the North Dakota Beekeepers Association, and winter short course in beekeeping, is set for January 31 to February 5, 1927. This is a very convenient time for most beekeepers to attend an affair of this kind, and it is expected that many will attend the meetings. The meetings will be held at the Agricultural College, Fargo, North Dakota. One of the important subjects to be discussed will be wintering and protection of bees. This is a very important problem to beekeepers of the state. The loss of colonies due to winter losses was estimated as being above 15 per cent. Spring dwindling and losses caused by heavy winds after the bees had been set out on summer stands probably caused an additional 10 per cent. Other subjects for discussion will include the various phases of seasonal management and grading and marketing honey.

A detailed program of the meetings will be announced soon and will include a list of the speakers and the various subjects to be discussed.

A bee cellar is in the course of construction for the Experiment Station Apiary. It is being constructed of concrete, reinforced with steel throughout. The cellar is to be completed by November 1, which should be soon enough for occupation by the bees.

The cellar is being constructed to conform to the requirements of good cellar wintering in this latitude, and a special consideration of it will be a feature of the meetings.

### Results of Arkansas Semi-Annual

The Arkansas Beekeepers' Association completed arrangements, at its semi-annual meeting, at the Hotel Marion, to place four tons of Arkansas honey on exhibition at the State Fair. Honey for the exhibit will be furnished by members of the association and will be offered for sale at the close of the fair.

J. V. Ormond, of Elba, president of the association, presided at the meeting, which was attended by thirty or forty apiarists and others interested in bee culture.

The association went on record as favoring enactment of a law providing inspection of bees, so live bees can be shipped out of the state. H. K. Thatcher, secretary of the association, said Arkansas is one of four states which have no protective legislation for bee raisers. As a result of this condition, live bees cannot be shipped out of the state, be-

cause all surrounding states have quarantine regulations prohibiting non-inspected bees from crossing their borders. On the other hand, diseased bees can be shipped into Arkansas without restriction. The proposed law would place the duty of inspection in the hands of the Arkansas Plant Board.

The association deferred action on a proposal to join in a national honey advertising campaign until the February meeting. The meeting will be a two-day session, with the first day an open meeting for the public. Several well known bee specialists will speak and motion pictures of bees at work will be shown.

The association separated the state dues from the national dues and provided for the payment of a reward for the apprehension of persons stealing or otherwise molesting bees. Paul J. Pirmann, Fulton, Mo.

### Illinois State Association Meeting at Springfield, Dec. 9-10.

The twenty-sixth annual meeting of the Illinois State Beekeepers' Association will be at the St. Nicholas Hotel, Springfield, Illinois, December 9 and 10, 1926. For years these notices have read same hotel, same place, same month, until there is a sleepy sound to it, but - - -

There is nothing sleepy about the program. J. H. Paarman, Davenport Academy of Sciences, will give his story of "Honey Plants of Middle West," with one hundred slides in color. This is a gem, as Mr. Paarman has centered twenty-five years of study on the subject for the country, immediately important to Illinois beekeepers.

And that's not all. L. T. Floyd, Provincial Apiarist of Manitoba, Jay Smith, of old Vincennes, and other possible outside speakers, an educational exhibit,—plenty of life. There are several matters of legislation and appropriations that will need the support of all those present. Illinois beekeepers should begin to pack their grips now for December 9 and 10.

### Ontario Bee Men Meet at Toronto

The Ontario beekeepers' convention will be held at the Prince George Hotel at Toronto, December 7, 8 and 9. The Bee men of eastern Canada always have live conventions, and those who attend may be assured of a worth while program.

This is the fourth year that the Ontario honey crop has been handled by a cooperative association, and much benefit seems to have resulted. Much honey is now shipped to English markets, and cut-throat compe-

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The sturdy, handsome fluted "Diamond I" Honey Jars shown above have been adopted as standard by the American Honey Producers' League. Available in 2-oz., 1/2-pound, 1-pound and 2-pound sizes through the following distributors or direct:

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tition is avoided at home by means of the organization. Beekeepers from this side of the line will find it much to their advantage to attend a Canadian meeting now and then, for we have much to learn from our neighbors to the north.

Speakers from outside the province are to be G. M. Newton of Winnipeg, Manitoba, C. B. Gooderham of Ottawa, Miss Mary Barber of Battle Creek, Mich., and E. F. Phillips of Cornell University, Ithaca, N. Y.

### Arkansas Meeting

Arkansas beekeepers will meet at Hotel Marion, in Little Rock, on January 20 and 21. The dates have been selected for the convenience of those who expect to attend the national convention. M. G. Dadant, of the American Bee Journal staff, expects to attend this meeting on his way to New Orleans, where the National meets soon after.

J. V. Ormond, secretary of the Arkansas association, invites all delegates to the New Orleans meeting to stop over at Little Rock to get acquainted with the Arkansas honey men. He proposes that all go from there to Hot Springs by auto at the close of the meeting, spending the night at that famous resort and leaving from there for New Orleans on Sunday.

### Oregon Annual Conference at Dallas, Dec. 2-4

We do not have the detailed program, but it is understood that a large part of the meeting will be devoted to a study of the disease control problem in the state of Oregon. The convention will open on Thursday noon, December 2, and it is hoped that all business will be finished before Saturday noon, December 4, the afternoon being devoted to field trips.

### Indiana Bee Men at Indianapolis

The Indiana beekeepers' convention will be held at the Claypool Hotel, Indianapolis, on January 13 and 14. A banquet will be held on the evening of the 13th. Indiana bee men are in the habit of holding interesting conventions, and there should be a good attendance. M. G. Dadant is expected to be among those present from outside the state.

### California State Association Gathers at Los Angeles, Dec. 9-11

The California State Beekeepers' Association is to hold its annual convention this year in Los Angeles, December 9, 10 and 11. Many well known beekeepers are to appear on the program. The matter of the revision of the present state law con-



cerning bee inspection is to receive consideration.

#### The Sixth Annual Convention of Wyoming Beekeepers

At the Washakie Hotel, Thermopolis, November 30 to December 3. Almost too early to announce in the December Journal, but get going if you aren't there already.

#### New Book by John H. Lovell

A new book, "Honey Plants of North America," by John H. Lovell, of Waldoboro, Maine, has recently been issued by the A. I. Root Company, of Medina, Ohio.

As many of our readers know, Mr. Lovell is a naturalist who has devoted many years of study to the relation of bees to flowers, to the pollination of plants, and to the behavior of plants in the secretion of nectar. He is therefore well qualified for the task which has resulted in the above named volume.

The book is divided into four parts. In Part I he devotes six chapters to a consideration of the structure and role of the flower, the secretion of nectar, honeydew, and similar subjects. Part II is devoted to the plants valuable chiefly for pollen. Part III, containing nearly two hundred pages, is given over to consideration of the plants which are important as the source of nectar. Part IV relates to the floras of the different states, and contains an extended discussion of the relative importance of various sections for beekeeping.

The book is well illustrated with many original photographs taken by the author and others, and is beautifully bound in substantial fabrikoid binding. The price is \$2.50.

This new volume is a substantial addition to the literature of the honey flora of our country, and the author and publishers are to be congratulated upon a fine piece of work.

F. C. P.

#### Munro Reports Freight Reduction For North Dakota

J. A. Munro writes: "There will be a reduction in freight rates on honey shipped from North Dakota to points east. The various railroad companies interested have agreed to publish a \$1.35 rate on honey for eastern destinations. This will make our rate the same as that for California and other western states and will be a saving of 22 cents per hundred pounds over the old rate."

No North Dakota beekeeper will shed tears over this.

## TENNESSEE-BRED QUEENS

Sixty-six Years with Bees and Fifty-four Years a Queen Breeder. Breed Three-Band Italians Only

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Select Untested.....	2 25	9 50	18 00	1 75	9 00	15 00	1 50	7 50	13 50
Tested.....	3 00	16 50	30 00	2 50	12 00	22 00	2 00	10 50	18 50
Select Tested.....	3 50	19 50	35 00	3 00	16 50	30 00	2 75	15 00	21 00

Select tested, for breeding, \$7.50.

The very best queen, tested for breeding, \$15.00.

I sell no bees by the pound or nuclei, except with high-priced tested and breeding queens.

Queens for export will be carefully packed in long-distance cages, but safe delivery is not guaranteed.

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DR. J. C. HUTZELMAN, Glendale, Ohio

## Relation of the Honeybee to Fruit Pollination

A bulletin on the above subject by a careful student, Mr. Ray Hutson, has been published by the New Jersey Experiment Station. It comprises thirty-two pages and gives the result of a number of experiments. From this we see that, as already stated in the report concerning the Hillview orchard mentioned in our February number, there is much more chance of productive pollination when the hives are placed so as not to be over a hundred yards from the trees to be pollinated. In fact, the bulletin recommends that the distance between hives be not over 210 feet. This, however, is certainly necessary only in cool springs, when bees cannot go far. In our own case, we have often seen them go a mile in large numbers, when no other bloom was near. It is quite probable that the necessity for close vicinity of the hives is to secure a uniform action on the part of the bees.

The bulletin in question is replete with valuable information.

## Honey Vinegar

The Michigan State College Agricultural Station gives a description of the method of making honey vinegar, by Frederick W. Fabian, in Bulletin No. 85, containing twelve pages. It is quite thorough. Few people know that much waste honey may be made into vinegar. It is not usually desirable to convert high grade honey into this commodity, because vinegar may be made so very cheaply from apples. But honey vinegar, when well made, is of better taste than apple vinegar. It is fully as good as wine vinegar.

## An Odd Fact

The refusal of bees to sting at certain times is one of the most interesting phases of bee handling for the public. A picture or a story about somebody who handles bees and is not stung is almost sure of publication. Even the movie press agents realize that. One of them sends out a story: "The trained fleas that used to delight the eye and imagination of our fathers are being supplanted by trained bees. Out at Universal City they are using bees secured at the edge of the Mohave Desert, at \$25 a day, that will walk on Edward Everett Horton without stinging."

# Crop and Market Report

Compiled by M. G. Dadant

## CROP MOVING

There seems to be no indication of any extra heavy movement of honey this year, largely due, we believe, to the fact that there has been an extra large crop of fruit to move. Reports come from New York that carloads of peaches are still held in storage for sale, with very little demand developing, which is a condition the peach markets have not been confronted with for years.

## PER CENT OF HONEY IN HANDS OF PRODUCERS

The amount in New England states is less than 25 per cent in the hands of producers, and this ranks good also for New York and most states along Atlantic seaboard.

Georgia and Florida report about 30 per cent on hand, as does Louisiana; other southern states reporting in the neighborhood of 40 to 50 per cent still remaining on hand.

In those states comprising the northern lake states, the amount still left on hand is about 50 per cent, which also applies to most states in the Mississippi Valley.

It is in the intermountain territory that we find the largest amount of honey still on hand, producers reporting that they have practically their entire crop.

Idaho seems to be the one state which has sold out fairly well on honey, and this is probably largely due to the fact that producers there were willing to take an extremely low price in order to dispose of their crop.

Some of the better producers in Montana, Wyoming, Utah, and Colorado, are holding for a stiffening price which they hope will develop a little later on, and as a consequence are holding quite a majority of their 1926 crop.

In California, practically the entire surplus crop has already been moved, due to some very heavy orders for honey from Germany.

Correspondents reporting to us state that not over 20 per cent of the honey remains in the hands of producers in the state of California, and that this will be readily disposed of before the new season comes.

Similar conditions to those in California pertain to practically all the provinces of Canada, where there seems to be no question but what the entire honey crop will be readily disposed of before another crop comes. The production, of course, this year, was under normal, but the total considering the amount carried over from 1925 would make almost a normal crop to be moved, which will probably be done without difficulty.

## ARE JOBBING PRICES STIFFENING?

In most cases, especially in eastern sections, there is no indication of a stiffening of jobbing prices, simply because of the fact that their prices are governed by the competition of western honey, which has been extremely low this year.

We find, however, a tendency toward stiffening prices in states as follows: Iowa, South Dakota, Nebraska, Utah, Wyoming, California, and all provinces in Canada.

So far, we have been talking only of extracted honey. Comb honey has moved very readily this year, although large quantities moved earlier at sacrifice prices. We find one association asking in the neighborhood of \$4.25 to \$4.50 per case for number one comb in carload lots, and getting this price. In fact, the amount of comb honey available is small, and most eastern producers have disposed of their entire crop and many markets are already bare.

There can be no doubt but that the low jobbing prices as offered earlier in the season, and which are now still ruling the honey markets, are largely due to the fact that the beekeeper could not understand that there was a possibility of holding an average price on honey if all were not dumped at the same time on the market. This "dumping on the market" meant an apathetic buying attitude on the part of the honey jobbers, and naturally the price was bound to suffer and will be slow to recuperate.

It does not appear that the amount of honey still left on hand, which is less than 50 per cent of the total crop, should in any way lead to any further deterioration in the market, and it would undoubtedly appear that with any foresight and judgment the crop should move without difficulty at prices considerably in excess of those which have been ranging as a rule this year.

## CONDITION OF BEES

In practically all sections the condition of bees seems to be very good for the winter, there being without any exceptions plenty of bees in the hives to go into the winter.

One objection, however, has been the very prolonged fall without honeyflow, which has made for depletion of stores. Unless the beekeeper has replaced these stores by feeding sugar syrup, it is possible that there will be a large amount of starvation this year, especially in case the winter is severe and the winter packing is not carefully applied.

## CLASSIFIED DEPARTMENT

Advertisements in this department will be inserted for 5 cents per word, with no discounts. No classified advertisements accepted for less than \$5 cents. Count each initial or number as one word.

Copy for this department must reach us not later than the 15th of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

As a measure of protection to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisements of used beekeeping equipment or of bees on combs must be accompanied by a guarantee that the material is free from disease or be accompanied either by a certificate of inspection from an authorized inspector or agreement made to furnish such certificate at the time of sale.

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**THRIFTY** Caucasian bees and queens for 1927. Packages or nucleus headed with daughters from our direct imported or our own select breeders. Let us figure with you on your needs.

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**EARLY** package bees and highest grade Italian queens. Our only business is Bees and Queens. We do not produce honey, deal in supplies or sell off a few old bees in the spring as a side line. Our colonies are worked exclusively for the production of young, vigorous, healthy worker bees for packages. Colonies are drawn on about every two weeks from March 20 to June 20. Two- and three-pound packages. Fifty pounds or more \$1.00 per pound. Select three-band Italian queens \$1.00 each. Ten per cent deposit will book order and reserve shipping date. Large orders booked in advance will receive special prices. We guarantee both safe arrival and satisfaction.

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Most Northern Breeder in California.

**1927 PACKAGE BEES**—Pure Italians. Prices reasonable considering quality. If in the market for bees or queens, a card will get our price list. The Crowville Apiaries,  
J. J. Scott, Prop.,

**BEES AND QUEENS**—For spring delivery. Prompt delivery and satisfaction guaranteed. Three-band Italian queens and good young bees. One 2-lb. package of bees and untested queen, \$3.50; twenty-five 2-lb. packages of bees and untested queen, \$3.25 each; one 3-lb. package of bees and untested queen, \$4.50; twenty-five 3-lb. packages of bees and untested queen, \$4.25 each. Liberal discount on early orders.

W. H. Moses, Lane City, Texas.



**PACKAGE BEES**—See larger ad on page 611 or write for prices.

John A. Williams, Box 178, Oakdale, La.

**BUY EARLY**—Shipping starts April 10. Twenty per cent down, balance shipping time. Best golden three-banded Italian bees and queens, all standard material. Delivery guaranteed. State certificate of inspection guarantees healthy bees. One 2-lb., \$3.90; ten 2-lb., \$37.00; twenty-five 2-lb., \$90.00; one 3-lb., \$4.50; ten 3-lb., \$42.00; twenty-five 3-lb., \$106.00; one 4-lb., \$5.25; ten 4-lb., \$50.00; twenty-five 4-lb., \$125.00; one 5-lb. with two frames brood, \$6.50 each. All packages priced with good select untested queens.

Cloverland Apiary,  
Hamburg, La.

#### BOOKING FOR MAY DELIVERY 1927—

Try Dalton's introduced, laying-enroute to you queens in packages. Save the risk of introducing her, gain the days it takes for her to get to laying and make you brood to emerge into bees. Two frames of honey brood and bees, well covered, two additional pounds shaken in, a good young Italian queen on those combs laying before she starts to you. Price f. o. b. Bordelonville, \$6.00 per single package; 20 per cent cash books your order. Frames, Standard Hoffman, largely built on Dadant's Wired Foundation; bees and queens, light Italians, called Golden. Health certificates on every package. Remember that last season I rejected more orders after filling to capacity than I accepted. Satisfied customers for reference in most states.

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**EAT KELLOGG'S CEREALS BECAUSE HE IS BOOSTING HONEY.**

**BRIGHT American Beauty Italian Bees and Queens**—April 10 to June, 2-pound package with queen, \$4.00; 3-pound package with queen, \$4.75. Special, 2 pounds on frame emerging brood and honey, with queens introduced and laying, \$5.00. Untested queens \$1.25. Write for quantity prices. Most prolific strain in America.

Tupelo Apiaries, J. L. Morgan, Prop.,  
Apalachicola, Fla.

**I AM booking orders for May delivery on Caucasian three-frame nuclei; also queens. Yards inspected for protection of disease.**  
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**TEN YEARS of experience in breeding queens of quality Golden, also gray Caucasians. Golden queens: one, \$1.25; dozen, \$11.50. Gray Caucasians, one, \$1.50; dozen, \$15.00. Pure mating. Safe arrival guaranteed in United States and Canada.**  
Tillery Bros., Rt. 5, Greenville, Ala.

**LATHAM'S "She-Suits-Me" untested 3-banded, \$2.00 per queen from May 15 to June 5. After June 5, \$1.00 each. Packages and nuclei. Introduction insured. Send for circular.**

Allen Latham, Norwichtown, Conn.

**GOLDEN THREE-BANDED and Carniolan queens. Tested, \$1.00; untested, 75c each. Bees in 1-pound package, \$1.50; 2 pounds, \$2.50; 3 pounds, \$3.25. Safe delivery guaranteed. C. B. Bankston, Box 65, Buffalo, Leon Co., Texas.**

**TESTED QUEENS**—\$1.00 each for fall and winter. I mail queens every month of the year.  
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**FOR SALE**—200 ten-frame full-depth telescope winter cases, all double hived and packed, with gable roof. Prices: 50, \$100; 100, \$175; 200, \$300. Address  
Julian Dematteis, Batavia, Iowa.

**FOR SALE**—100 used beehives, eight- and ten-frame; no combs, free from disease; \$1.00 each. Will accept white Wyandottes or white Leghorn pullets in trade. Also 3,000 pounds extracted honey, 11c per pound f. o. b.  
Chester D. Keister,  
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**FOR SALE**—Hubam sweet clover seed, re-cleaned and scarified. Write for prices.  
Dadant & Sons, Hamilton, Ill.

**FOR SALE**—400 colonies on fine sage location near Los Angeles.

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**FOR SALE OR TRADE**—Will trade 1927 model Parmak radios for honey, or what? Edwin Collins, East Sixth Ave., Emporia, Kans.

**FIFTY ACRES** land in fireweed belt, 170 colonies bees in winter cases, enough supplies to run 200 colonies, Lewis-Markle power extractor, three storage tanks, 7000-pound capacity. This apiary produced 20,000 pounds surplus honey this year.

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**FOR SALE**—Best bee location in North Dakota—bar none—at Stanton, N. D., on Missouri River bottoms; 2000 acres of sweet clover growing wild on sub-irrigated bottom lands. Room for energetic beekeeper. Concrete bee cellar 18x45 feet, well finished; dwelling house and small frame barn. Owner employed in office of tax com. at Bismarck, N. D., and engaged in beekeeping at Bismarck. Write for more details.

Herbert J. Roberts, 318 Mandon Ave.,  
Bismarck, N. D.

**ENTIRE bee equipment, new hives, supers, etc., for sale on account of death of owner. Cheap. Details furnished by**

H. M. Bacus,  
1203 Norton St., Alton, Ill.

**FOR SALE**—Between 400 and 500 colonies bees, 31 acres land, in the Black Belt of Montgomery county, located on main highway. Apply to

M. S. Nordan, Mathews, Ala.

**FOR SALE**—Pure sweet clover honey in carloads or in single cases. Let us know your needs. Dakota Sunshine Apiaries, Amenla, N. D.

**FOR SALE**—Comb honey shipping cases. Several thousand, holding 24 sections  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ , single tier, glass front. Used once, like new. 25c each. Two 60-pound cans to case, 50c a case, F. O. B. Chicago.

A. L. Haenseroth,  
4161 Lincoln Ave., Chicago, Ill.

**FOR SALE**—We are constantly accumulating bee supplies, slightly shopworn, odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list of our bargain material. We can save you money on items you may desire from it.  
Dadant & Sons, Hamilton, Illinois.

#### HONEY AND BEESWAX

**FOR SALE**—Good quality clover honey.  
Lewis O. Klaty, Carsonville, Mich.

**SHALLOW** frame white comb honey and white extracted honey.  
The Colorado Honey Prod. Ass'n,  
Denver, Colo.

**RASPBERRY-CLOVER** honey in new 60-lb. cans. Sample 15c.  
L. C. House,  
Stambaugh, Mich.

**CLOVER** and basswood honey, blended by the bees. Color, white; body, fine. Prices on request. State amount wanted.  
W. A. Jenkins, Rockport, Mo.

**ALFALFA** sweet clover honey from the Black Hills in 60-pound cans. Extra fine and nice. Sample 15 cents, delivered.  
Lowry Elliott, Box 73,  
Buffalo Gap, S. D.

**FOR SALE**—Choice clover honey in 60-lb. cans. Write for price.  
G. E. Tripp, Rock Valley, Iowa.

**HONEY**—Large stock extracted. Producers who need more, dealers and solicitors should write us about their wants.

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**HONEY** in 5- and 60-pound cans.  
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**FOR SALE**—Tupelo-gallberry blend light amber extracted honey in 60-lb. cans and cases. Thoroughly ripe. Sample 10c.  
Porter C. Ward, Elkton, Ky.

**NEVADA** white alfalfa honey.  
C. E. Andrews, Fallon, Nev.

**WHITE** clover extracted honey in 60-lb. cans at 12c.  
W. Ritter, Genoa, Ill.

**FOR SALE**—White clover honey in 60-lb. cans. None finer.  
J. F. Moore, Tiffin, Ohio.

**HONEY**—All kinds. Write for samples and prices. D. Steengrafe,  
116 Broad St., New York City.

**FOR SALE**—Choice heavy-bodied honey. Not extracted until thoroughly ripe. Not excelled. Case or carlot. Sample 10c.  
Arthur Beals, Oto, Iowa.

**FOR SALE**—Choice clover extracted honey packed in new 60-pound cans and cases.  
J. D. Beals, Dwight, N. Dak.

**FOR SALE**—Choice white extracted honey in 120-pound cases. Sample, 15 cents.  
Ralph Lenosky, Route 5,  
East Jordan, Mich.

**CLOVER HONEY** in 60-pound cans. Sample 15 cents; 10 cents pound f. o. b. Greenville, Wisconsin.  
Edw. Haessinger, Jr.

**IF you are looking for honey better than the average, let us hear from you, as we have it in new 60-pound cans, carload or less. Write**  
D. R. Townsend,  
Northstar, Mich.

**WHITE** clover and light amber fine honey in 60-pound cans. State quantity wanted; I will quote you a right price, or you send in your bid on large quantities. Sample on application.  
Lee Horning,  
R. 4, Morrison, Ill.

**FOR SALE**—Good quality comb honey.  
John Evanoff, Route 4,  
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**FOR SALE**—Fine quality clover honey in 60-pound cans. Sundberg Bros.,  
R. 3, Fergus Falls, Minn.

**BEE-DELL** quality light amber extracted honey. One ton baking honey. Two cases 96 each individual sections comb honey.  
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**FOR SALE**—1926 crop of finest clover and clover-basswood honey in new 60-pound cans. Irvin Nordgaard, Peterson, Minn.

**E. D. TOWNSEND & SONS**, Northstar, Michigan, the most extensive extracted honey producers in the Central West, offer their 1926 crop of clover honey for sale in new sixties. Any quantity. Let us figure with you on a delivered price on a carload of this fine honey.

**FOR SALE**—Sage honey (extracted). Case or ton.  
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**FOR SALE**—Light amber honey, put up in new 60-lb. cans and cases, thoroughly ripe, at 10c per pound.  
Martin Carsmoe, Ruthven, Iowa.

**FOR SALE**—Sweet clover extracted honey, case or carlot. Strictly first class in every way. Also choicest quality basswood.  
Thomas Atkinson, R. 5, Box 200D,  
Omaha, Neb.

**SPECIAL PRICES** on finest quality clover. Case or carlot. C. S. Engle,  
1327 23rd St., Sioux City, Iowa.

**FOR SALE**—Excellent quality clover and basswood honey, 10c per pound, in new 60's. Sample.  
Ohmert & Son, Dubuque, Iowa.

**WINKLER'S** choice extra fancy new white clover, extracted. Write for new low prices. Sample prepaid 15c.  
Edw. A. Winkler, Joliet, Ill.

**FOR SALE**—White clover comb and extracted honey in packages to suit. Also northern bred high-grade Italian queens. Write for prices. Jay Cowing, Jenison, Mich.

**"BEEWARE"** and Dadant's Wired Foundation for the Northwest. Catalog prices. F. O. B. Fromberg, Montana. Beeswax wanted. Write for prices.  
B. F. Smith, Jr., Fromberg, Mont.

**FOR SALE**—Comb and extracted honey, both light and dark. Write for price list.  
H. G. Quirin, Bellevue, Ohio.

**HONEY WANTED**—Several thousand cases white clover comb honey, size  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ . Must be white and strictly graded, fancy and No. 1. No other grade wanted; also extracted. Send sample, give quantity and price wanted. We pay cash.

A. L. Haenseroth,  
4161 Lincoln Ave., Chicago, Ill.

**HONEY FOR SALE**—In 60-lb. tins. White clover at 12c lb.; white sage at 12c lb.; white orange at 13c lb.; extra L. A. sage at 11c lb. Hoffman & Hauck, Inc.,  
Ozone Park, New York.

**FOR SALE**—Comb, extracted and chunk honey. Prices on request. Samples 15c. F. W. Summerfield, Waterville, Ohio.

**FOR SALE**—White and water white sweet clover honey; put up in 5-gallon cans. Strictly first-class in every way. Write for prices, stating quantity wanted. Dadant & Sons, Hamilton, Ill.

**FOR SALE**—Our own crop white clover and amber fall honey in barrels and cans; also white alfalfa in cans. State quantity wanted and we will quote prices. Samples on request. Dadant & Sons, Hamilton, Ill.

**BEEWAX WANTED**—We need large quantities of beeswax and are paying good prices now. Ship to us at Hamilton, Ill., or Keokuk, Iowa, or drop us a card and we will quote f. o. b. here or your own station as you may desire. Dadant & Sons, Hamilton, Ill.

**HONEY FOR SALE**—Any kind, any quantity. The John G. Paton Co., 217 Broadway, New York.

### SUPPLIES

**ROBINSON'S** comb foundation will please the bees, and the price will please the beekeeper. Wax worked at lowest rates. E. S. Robinson, Mayville, N. Y.

**BEE SUPPLIES**—Let us quote you on what you need. If we can't save you money, we don't want your order. They are guaranteed to please. The Stover Apiaries, Tibbe Station, Miss.

**20% DISCOUNT** on Quinby hive bodies with frames. Also eight-frame Excelsior cover hives. All new Lewis goods. K. D. Other bargains. Edward Klein, Waukegan, Ill.

**FOR SALE**—Good second-hand 60-lb. cans, two cans to a case, boxed. We have large stocks of these on hand. Please write for prices if interested. We are offering only good cans and good cases. C. H. W. Weber & Co., Cincinnati O.

**WESTERN BEEKEEPERS**—We can demonstrate that you can save money on buying bee supplies of best quality. Write for our latest price list.

The Colorado Honey Producers' Association, Denver, Colorado.

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**THE DADANT SYSTEM IN ITALIAN**—The "Dadant System of Beekeeping" is now published in Italian, "Il Sistema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price \$1.00.

**WESTERN HONEY BEE**, 2823 E. 4th St., Los Angeles, Calif., published by Western beekeepers, where commercial honey production is farther advanced than in any other section of the world. \$1.00 per year. Send for sample copy.

**MAKE** queen introduction sure. One Safin cage by mail, 25c; 5 for \$1.00. Allen Latham, Norwichtown, Conn.

**HAVE YOU** any Bee Journals or bee books published previous to 1900 you wish to dispose of? If so send us a list. American Bee Journal, Hamilton, Ill.

**GLEANINGS IN BEE CULTURE**, published at Medina, Ohio, is the most carefully edited bee journal in the world. Its editor-in-chief is George S. Demuth. Its field editor is E. R. Root. Ask for sample copy.

### WANTED

**JOB** with commercial beekeeper. Experienced beekeeper. Small family. Reference furnished. Clarence Barker, Milfay, Okla.

**WANTED**—To buy used bee equipment for a hundred swarms. F. H. Noehl, Pine Island, Minn.

**I HAVE** a position open for one or two industrious young men wishing to learn commercial queen rearing, package shipping and honey production. Must be white, of good habits and repute. Would rather they be not over twenty-one. Not much wages first season, but a good thing for anyone wishing to specialize on bees. Much outdoor work and camping in pleasant weather. Please give all qualifications your first letter. R. V. Stearns, Brady, Texas.

**WANTED**—Prices for carlot customers extracted honey, and smaller quantities, delivered to Chicago. John G. Carlberg, Com. Broker, 1943 Balmoral Ave., Chicago, Ill.

**WANTED**—Small extractor. Must be cheap. Fred Hammerly, Albany, Wis.

**WANTED**—Experienced man, extracted honey, 1927 season in Montana. State age, experience, salary desired. Clyde V. Fisher, 750 South Wheeling, Tulsa, Okla.

**WANTED**—Healthy, clean, single, young bee man of some experience with a car and bees, to help with outapiaries next season. A. W. Bulay, Livingston, Texas.

**WANTED**—A position, by an experienced beekeeper, with a large producer. Best of references. Edney Hendrickson, Durham, Ark.

**WANTED**—Experienced man for season of 1926. B. F. Smith, Jr., Fromberg, Mont.

**WANTED**—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for the same; also send for my cut price circular on cans and pails for honey containers. A. W. Smith, Birmingham, Mich.

**WANTED**—Shipments of old comb and capings for rendering. We pay the highest cash and trade prices, charging but 5c a pound for wax rendering. Fred W. Muth Co., 204 Walnut St., Cincinnati, Ohio.

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## Burr Combs

### A Problem In Transposition

By C. L. Swanson

Unless you are an Indian, your ancestors came from the Old Hemisphere either on the Mayflower or on some other ship. (Mine came here on a much nicer and larger ship.) I have always thought that it took a lot of courage on the part of my parents to come to a new country where a new language was spoken and where new customs were in use. Yet suddenly a thought came to me that took some of the superiority out of my dreams. Everyone else had ancestors who had taken that very step (some stride) or else had done the little crossing for themselves.

Just for fun (maybe you'll differ on this word) let's suppose that our roaming ancestors who had crossed the briny had been home-loving people and had not strayed away from their firesides. Picture yourself in England, Italy, Germany, France, or whatever country from which your ancestors came. During the past twenty years great experiences would have been your lot. First, the quiet, peaceful life perhaps on one of the many clean, small, neat farms, or in a village or city. Then would have come the period of rumor and fearful tidings. This short period would have been followed by dreadful fighting which would leave your country (yours in supposition) war-torn and in a state of upheaval and distress. Then a little later we would see this same disrupted country laboring bravely under serious difficulties to build up to pre-war strength, both financially and physically.

Had I been born and raised in the native land of my parents, I might have lived on a small farm at my present age. Previous to this I would have attended school, and also served two years in the army, where I would have worn a khaki uniform in drill and a magnificent dress uniform in parade. When on a furlough I would walk stately down the street with my blue dress coat buttoned tightly up under my chin. On such occasions how I would have thrilled the maidens, and all of the other boys would have called me "Spare Ribs," or the equivalent in their tongue, because of the gold braid on the coat resembling the ribs that it covered.

And after the army training was over and I had settled down to a lifetime of work, what fun we would

have at the folk dances and at the gatherings. When I was rather young my mother took me to her old home for a visit. I remember the large, full, holiday dresses and aprons that were worn by the girls. Green, red, blue and purple, all deep colors worked on a background of white. Some contrast in my mind with our native flapper in regulation street attire. In the U. S. A. clothes don't make the man, but the lack of clothes proclaims the woman.

And one more thing just between friends: Volstead didn't have much influence over there. That probably has a meaning to some of you.

But would we have been satisfied or contented in such surroundings? Very likely not! Our ancestors were ambitious, adventurous or of a roving disposition, or they would never have crossed the Atlantic pond, that famous old landmark that comes up close to our east coast (and is so dry that it is dusty until you get twelve miles from shore). And if the majority of ambitious people came to America, doesn't it seem reasonable that a large proportion of their descendants should inherit that same trait?

(Author's note:) Even as you and I.

(Editor's note:) The above phrase was borrowed from some more noted author.

(Author's note:) All right, Ed.; you return it when you're through with it.

Now the way we feel about it is that the European doesn't hurry quite as much as we do. We feel that he is not forced to rush and push throughout his lifetime. He has more time to study art and literature, more time to relax. Whether this is true or not, we have been assured by Europeans that our citizens are rushing aimlessly around, worrying themselves into an early grave. There is more truth than poetry in that statement, too. It does not apply to every case, but if you take nine out of every ten successful men you will find that as a rule they worked all day and planned, studied or worked part of the night. While he was young he couldn't afford to "lay off," and when he became older his cares and responsibilities would not let him

grow lax. The successful business man is usually at the head of a company or corporation which has financed itself by bonds or stocks. These securities are held by laboring men, by retired or wealthy farmers, by merchants and by all manner of men. The president of the company must in the end answer to these men. This and his duty to the public and to humanity keep him at his post long after he should be.

The laboring man, or the clerk, or the stenographer, or the machine operator in the factory, can't stop. If he wasn't on hand every day, he or she couldn't keep up with the crowd in dresses, cars, and a million other little things that you all know about.

Then look at the holidays that the European has which we do not. We have six holidays that are regularly observed, with sometimes Armistice Day making seven. Europeans think we are a young country and haven't reasons for holidays. But look at the great men we have had, the wars we have won, and other great events which slower moving people might elaborate into holidays. We're too busy for holidays.

The Old World farmer may cut around his little field with a hand sickle to save every grain of wheat. The western wheat grower cuts, threshes and sacks his wheat with one operation, the wheat handled entirely by machinery. Can you wonder why the American backs his car out of the garage to drive two city blocks to the grocery, or the clothier?

The little Old-World girls, with the shy courtesy, a salutation, half bowing, half-kneeling, still remains in my memory. I wonder if this custom still is used? Contrast it to the U. S. flapper, much mentioned and little understood.

Well, now, after you have thought it over a few minutes, what do you say to returning. "Nothin' doin'!" Just as I expected. We may bewail the rush of the American people, but no one wants to go back where it may be easier to lose ambition and to enjoy life in a slower, easier fashion than to rush and dig (and sometimes borrow) to have a nicer home, or a longer car, or a more powerful radio than our neighbor, who is doing the same to outshine us.

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